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Original Articles

THE DISEASED TONSIL AND ITS EFFECT UPON THE GENERAL SYSTEM.*

By W. P. Caven, M.D., Toronto.

In the first place, I would like to draw attention to the influence that chronic enlargement of the tonsillar tissues, and in this I include the adenoid tissue in the vault of the pharynx, may have on both the mental and bodily development of children.

This is a subject of special interest to the general practitioner, as it is he who first has an opportunity of coming in contact with the conditions; and upon his thoroughly understanding these conditions and their proper treatment may depend the future mental and physical development of the child.

Hypertrophy of the tonsillar tissues is occasionally congenital, or the enlargement may follow diphtheria or the eruptive fevers. It may be part of the general hyperplasia of the lymphatic glands and lymph tissues (spleen, thymus, etc.) throughout the body, met with in the condition of lymphatism or Status Lymphaticus, a condition of special interest owing to the frequency of occurrence of sudden death from some apparently trivial cause. We are all familiar with the great risks of anesthetics here, either local or general, cases of sudden death in this condition have also been reported immediately after injection of antitoxin for diphtheria, and patients, the subjects of lymphatism, also seem to incur special risk of sudden death while bathing.

Pretauf believes that the subjects of this hyperplasia have

*Read at Canadian Medical Association, Toronto, June, 1910.

lowered power of resistance, and are specially liable to paralysis of the heart.

The immediate effect of tonsillar hypertrophy is, of course, mouth breathing, and this indirectly leads up to well-marked chest deformities and to a characteristic facial expression. The child becomes dull, stupid looking, answers slowly; lips become thick and altogether may present the picture of one both mentally and physically stunted.

It is interesting here to note that Hutchinson has suggested that the embryological relationship of tonsillar tissue with the pituitary body may account for the interference with development.

Dupuytren, in 1828, drew attention to the chest deformities associated with enlarged tonsils, and it is now well recognized by physicians that the Pigeon Breast, the Barrel Chest and the Funnel Breast are largely induced by naso-pharyngeal obstructions.

In the Pigeon Breast, the sternum is bulged forward and Harrison's groove (diaphragm attachment), deeply marked. In a mouth breather, one can see the lateral regions retracted during inspirations by the diaphragm.

The Barrel Chest is brought about by the recurring attacks of asthma and consequent emphysema, due to the chronic naso-pharyngeal irritation and obstruction.

In the Funnel Breast there is a deep depression at the lower sternum, and there seems every reason to believe that obstruction to the breathing, due to adenoids, is a main factor in its production.

In mouth breathers, we also recognize a nasal quality in the voice, and stuttering is undoubtedly associated with it in some cases, the hearing is often impaired, and I think physicians will bear me out in saying that their little patients have often ceased complaining of headaches and facial muscle spasms by clearing away the obstructions to breathing.

The physician also is often consulted in regard to a fetid breath, which is found to be due to cheesy deposits in the tonsillar crypts.

A consideration of all these facts makes one think Catlin was not so far astray when he said, "Shut your mouth and save your life."

It is interesting here to note the results of attending to the cases of enlarged tonsils in the school children of New York City.

"Mayer" says that some of the children after operation showed an improvement of 100% over their former ability to work and in behavior, from the simple removal of hypertrophied tonsils. Within six months, 76 out of 81 operated on at one time had been promoted and were doing well in the advanced grades.

In the second place, I am going to say a few words about the constitutional affections entering the system by way of the tonsil and produced by tonsillar disease. I would here draw your attention to the fact that the enlarged visible tonsil is not the most dangerous. True it is the cause of obstructions; but it is the small diseased tonsil, buried deeply between the pillars of the palate which has no drainage and whose secretions are retained, that is the source of infection, the lymphatics from which distribute the poison.

What part does the tonsil play as a portal of entrance for tuberculosis? I think that all the evidence goes to show that we can regard the tonsil as one of the important portals of entrance. In lymphatic tuberculosis, we usually find that the victim has been a sufferer from catarrh of the mucous membranes and diseased tonsils, in consequence of which the local resistance is lowered, and the bacilli to which all are exposed are enabled to grow and are taken up by the lymphatics and passed into the glands. We see the same process in tuberculous mesenteric glands associated with catarrh of the bowel, and the tuberculous adentitis of the bronchial glands as a result of whooping cough and measles.

A case in point I quote from Marcelli: "On the right side of the throat of a young girl, there was found a chain of glands, among which there was an especially large one in front of the sterno-cleido-mastoid muscle. Pectoral organs healthy; no T. B's. in sputum. Right tonsil hypertrophied; small pieces of the tonsil were removed, and on microscopic examination were found to contain sparse but unmistakable tuberculous bacilli under the epithelial layer, especially of the crypts and also in the parenchyma (*Arch. Ital. di Laringol, Marcelli*)."

As Hudson-Maknen puts it, "We have all seen tuberculous glands of the neck appear and reappear in spite of repeated operations, until the focus of infection, viz., a diseased faucial tonsil has been found and removed, and I have no hesitation in saying that if these diseased faucial tonsils were found (I say found, because as a rule they are submerged) and removed at the proper time, tuberculous and otherwise infected glands of the neck would soon be in a great measure a thing of the past, and many cases of apical and other regional tuberculosis of the lungs would undoubtedly be nipped in the bud."

For a long time clinicians have noted the fact that acute articular rheumatism often follows an attack of tonsillar angina. Are the diseased tonsils a port of entrance for the virus? This is a.

question which is at the present time arousing great interest, and it is certainly one of the utmost importance. Its answer involves the etiology of rheumatic fever.

The discovery of a specific pathological agent in acute articular rheumatism has as yet not been definitely decided.

Many organisms have been described: a special bacillus by Achalme, forms of streptococci, Wassermann's diplococcus, called the micrococcus rheumaticus, and which has been isolated from the throat and joints and exudates in cases of rheumatic fever, and which Poynton and others have injected into rabbits, producing endocarditis and arthritis.

Cole, on the other hand, produced these same results with strains of streptococci. Clinically acute rheumatism presents many of the features of a septic infection, the character of the fever, mode of involvement of the joints, tendency to relapse, the sweats, the anemia, the leucocytosis and liability to endocarditis and involvement of the serous membranes.

The benign character of the joint inflammation in acute rheumatism, no pus formation, suggests that the organism producing the disease is an attenuated streptococcus. I think that the concensus of opinion at the present time is that the disease is due to a bacterial affection, even though its absolute proof is not yet at hand.

In view of these pathological findings and the clinical characters above enumerated, are we not justified in saying that diseased tonsils are a port of entrance of the bacteria, not the only port, but one of the ports.

The removal of the diseased tissues and clearing up the pharyngeal cavity, with the cessation of the rheumatism, would be the proof of the pudding.

I lately have had under notice a young lady of twenty-three years of age, who rarely went two or three months free from tonsillar affection and attacks of subacute rheumatism. This had been going on for years. About one year ago her tonsils were enucleated, they were somewhat of the submerged type, and a few drops of pus were squeezed from them. Since this clearing out she has been absolutely free of her rheumatic symptoms.

Another case of extreme interest which I have lately seen was that of a man of forty-six years of age, who had suffered a great deal from subacute rheumatism, and under my observation had had two previous attacks of quinsy, both of which were of long duration. This winter he again had a suppurative tonsillitis, the suppuration also being peritonsillar, and the organism found

being the streptococcus. The abscess was lanced and pus discharged freely, a day or two later erythema nodosum appeared on the legs and several of these nodes suppurated and large abscesses formed.

This streptococcus infection by way of the tonsil produced rheumatic manifestations, and yet the virus could not be called attenuated, in view of the pyemic manifestations. I had never before seen suppuration take place in erythema nodoesum, nor had I ever seen general abscess formation from quinsy.

I have only spoken of these two systemic diseases, tuberculosis and rheumatism, but many others have been attributed to tonsillar infection, e.g., measles, scarlet fever, whooping cough, endocarditis, myocarditis, pericarditis, nephritis, appendicitis, chorea and pleurisy.

THE DISORDER OF MEDICAL CHARITY.*

By Lauriston E. Shaw, M.D. (Lond.), F.R.C.P. (Lond),
Physician to and Lecturer on Medicine at Guy's Hospital, London, England.

Introducing his subject, Dr. Shaw prefaced his remarks by saying that he was not going to deal with internal medical charity, which he defined as the charity one member of the profession might extend to another or to his brethren as a whole, that charity that might be the outcome of medical men getting together in society work and association. Personal intercourse promotes brotherly feelings.

Collective internal medical charity he defined as the arrangements made by medical men themselves to deal with themselves those cases where sickness or early death throws members or their dependents upon the charity of the community at large. In this respect the profession of medicine should be self-supporting. To do it requires an organization where contributions could be collected from all members of the profession proportionate to their means. But such a provident system should be reserved for those who had previously shown prudence, regard for others and respect for the profession itself. Some such scheme seems a necessity to uphold the dignity of the profession.

External medical charity Dr. Shaw divides into individual and collective classes. The address principally deals with collective external charity, after a word was said about individual external charity. Of the latter everyone is cognizant. All over the world there are numerous evidences of this, and upon this the profession has often felicitated itself. And this has not always been confined to the bald, mere act of medical charity—it has been extended in such full measure as individual means will allow. If a physician in the practice of his calling dispenses his medical charity and goes further and puts his hand in his pocket and helps to a morsel of bread, that is a matter of each man's individual conscience and

*Digest of address delivered before the Stratford Division of the British Medical Association and published in The Lancet, Dec. 24th, 1910.

compassion. In this the medical man is as liable to do harm to charitable enterprise, just as the lay dispenser of charity. If in his own particular field the medical man restricts his charity to that field it may be a safe practice; but often other cases are brought to his notice beyond his own immediate environment. Then he is quite likely to get a "Kingdom comer," until death do them part. He who brings to the doctor this class of patient is a vicarious philanthropist; and medical men very often complacently comply. Dr. Shaw cites a good instance where a medical friend told him it was his custom when approached in this manner to send a small donation to the would-be philanthropist that it might be used to secure for the patient paid medical advice, observing that where the medical man was paid for his trouble the patient would benefit better thereby—(some wiseacres will deny this). Then the medical man is generally neither too flush with money nor too flush with generosity of this character to contribute to the fee of another practitioner. Promiscuous private charity, like promiscuous public charity, is fruitful in causing failure of suitable provident schemes whereby the really poor, whom we have ever with us, may be benefited.

Collective external medical charity is of greater moment to the medical profession, because as the volume increases the greater the harm. This sadly needs reform. Towards that reform there must be concerted action. It is widespread and apparent and needs no special commission to enquire into its extent and its whereabouts.

That the mere excess of the volume of medical charity is a splendid tribute to the qualities of heart of those responsible for it there is no gainsaying. In this our heads are controlled by our hearts; and in the face of individual suffering there is no help for it. But it is just because of this that in our cooler and saner moments we should give consideration to the ultimate results of our actions. The administration of medical charity, however, should be made more orderly, but to do this it is necessary to recognize the limitations of a civilized community. The impulsive philanthropist must be educated to take a wider view and be led to consider possibilities of prevention rather than cure of disease.

But is the imperative call of suffering and impending death the sole cause of the excessive supply of medical charity? Not by any means. Medical charity is cheap, and more of it can be purchased for a given sum compared with other charities. This is fully exemplified in the endowing of a bed in a charitable institution which will carry with it for all time both physician's and

surgeon's attention, as well as that of house surgeon and physician, sisters, nurses, attendants, laboratory workers, etc. When a bed is so endowed does not the philanthropist lay out his money to good advantage? The question is not why is such cheap charity so largely bought, but why is it so cheap to buy? Why can every philanthropist who thinks of building a hospital or founding a dispensary be confident that he can secure unlimited medical service free of cost?

Is it because the members of the medical profession possess a spirit of self-sacrifice and devotion to the cause of suffering humanity even greater and above that of their fellow-citizens? The orators at functions of medical men and others repeatedly assert this, and no medical man ever takes it upon himself to deny it. All sit with composure and gulp the compliment. This is not enough; some more satisfactory explanation must be found. The motives which lead medical men to give their services so freely to charitable institutions are "experience, advertisement, and honor." Here is something to gain which may be set over against the injustice of medical charities being run at the expense of the medical men who work them. Thus is afforded to a small section of the profession experience, advertisement and honor—the chief cause of the cheapness of medical charity. Thus is created a small, privileged class of the profession, and it is for the profession as a whole and the public to determine how it is really for the general advantage. Anything like a ring or corner in medical experience cannot be for the common good. In the public interest arrangements should certainly be made for the privileged class freely to share their experience with their less favored brethren by securing constant co-operation between the staffs of hospitals and the practitioners engaged in private practice amongst the neighboring population.

In commercial life advertisement is ultimately paid for by the consumer. In medical life—advertisement by charitable medical practice—the first cost is borne not by the advertiser but by his less prosperous colleagues, to whose possible patients he gives free service. In this way is vicariously paid by the general practitioner large amounts for the consultant's advertisement. It is probable that in the long run the public pays the profession as a whole for the advertisement. The general public and the main body of the profession are justified in looking askance at an arrangement which is largely responsible for the flood of medical charity.

Then there is the failure of medical charity to restrict its bene-

fits to the proper recipients, a difficult matter in itself. There is so much of it and its operations lack co-ordination. The selection, too, of its beneficiaries is unsatisfactory.

The writer then turns his attention to possible remedies. Some advocate ending rather than mending. Some suggest, as others have done before, an organization at public cost to orderly and efficiently effect all that medical charity now does, and then collective medical charity will gradually disappear. The State system of charity schools for elementary education is cited as a precedent for this. Government is tending to pass from the hands of the classes, who have hitherto exploited medical charity, into the hands of the masses, who have received the benefits therefrom; and the latter are quite cognizant of the motto, "It is more blessed to give than to receive."

But there seem to be two outstanding features of any proposed arrangement or organization which would meet with general acceptance: No interference with any State scheme for dealing with the treatment of the immediate poor; the recognition of the splendid results of the past arising from the partnership of medical charity, medical education and medical research. A continuance of this association must be fostered. The established custom of referring a patient to a specialist or calling in a consultant is universal, and here is the role for medical charity. Whilst it provides the help corresponding to the consultant or second practitioner, the latter should refuse in any case to deal at first hand with patients, but freely offering assistance to those who, in the usual way of private practice, by some provident system, or through the State, have secured the services of a medical attendant to deal with ordinary ailments, and are found by him to require and to be unable to pay for further assistance.

If, in following out these essential features, what opportunities would medical charities have for medical education and medical research? Some such arrangement as this would provide for "experience," which would be always shared with the general practitioner; for "advertisement" more valuable to himself and less costly to his unprivileged professional colleagues; for "honor" unalloyed by any feeling that he was dealing shabbily with his less fortunate brethren. The trivialities of out-patient practice would thus be relegated to general practitioners, who would receive proper remuneration for their work; but the student would thereby receive less opportunity for instruction therein, as most medical schools do not put much stress on the teaching of trivialities, which, however,

could be gotten in a provident dispensary or similar institution. The out-patient section of the hospital would then fulfil its true function of the "poor man's consultant."

But the great force, which Dr. Shaw feels confident, will in the end direct medical charity into this defined but effective field of activity, is the public spirit of the medical men responsible for the work. Men who possess the extraordinary advantages conferred on them by hospital appointments will not much longer tolerate the continuance of a system which bring them "experience, advertisement and honor," at such a heavy cost to their less fortunate colleagues, which hopelessly blocks the way to numerous urgently needed reforms in the medical treatment of the sick poor.

Medicine

Graham Chambers, R. J. Dwyer, Goldwin Howland,
Geo. W. Ross, Wm. D. Young.

Enteroptosis In Children. By William J. Butler, Chicago. *Journal A. M. A.*, December 31.

The "habitus enteroptoticus" is described as a condition which is regarded as a congenital and hereditary anomaly by those who have specially written on the subject. While this condition is more frequently seen in females it is often seen in males. The individuals are slender, of frail bony structure, thin musculature, and have little adipose tissue. The chest is long and narrow with small upper and lower apertures. Occasionally it is broad but shallow. The lower ribs are more or less vertical in direction and the epigastric angle is narrow. A floating tenth rib is rare. The abdomen is usually flat, with occasionally slight bulging below the umbilicus, while sometimes the lower part of the abdomen may be very prominent. He takes up and describes the body form in infants and says that in the first months of life of a healthy breast-fed infant we rarely see any suggestion of the enteroptotic habit. On the other hand in frail infants, suffering from various diseases of malnutrition, we often see many of its characteristics. If it could be found that the habitus enteroptoticus had its origin in periods of malnutrition it would be an important matter for the etiology, but this has not been established. He has examined from 300 to 400 children, the majority of them healthy, and gives the results. Fully 50 per cent. of all children have a movable tenth rib. In late childhood, however, at the approach of puberty, fully one-third of the females and about one-sixth of the males exhibit the characteristic habitus enteroptoticus. While no one sign can be depended on in children, he is convinced from his observation that evidences of the enteroptotic habit are observable throughout childhood, but in "a more pronounced form in a late childhood, approaching and in the period of puberty. In the first days of life palpable kidneys and liver are not to be regarded as signs of enteroptosis, as these findings are common at this period of life. Beyond the first year and up to late childhood palpable kidneys and dis-

placed stomachs are exceptional, although signs of this habitus are evident in some of the children examined. On the other hand, coinciding with the development of the adult type of this habitus, with the approach and in the period of puberty, the displacement of the abdominal viscera become less exceptional; in fact, the actual ptoses, I believe, are practically first seen at this time."

Hematemesis. Sir Dyce Duckworth (*The Lancet*, Oct. 29, 1910). Abstract in *Medical Times*.

Sir Dyce remarks that many observers hold the view that in many patients there is no true ulceration present, but a series of small fissures, or chaps, from which blood oozes freely. With regard to a fatal issue in all cases by hemorrhage, he says that this is happily not a common occurrence. Whatever the lesion, the treatment of the patient is the same, and it consists in absolute rest, recumbency with head low, and morphine given hypodermically. Nothing whatever is to be given by the mouth, not even ice water or pieces of ice. Saline solution, in half-pint quantities, should be given by bowel, and nutrient enemata consisting of from eight to ten ounces of peptonized milk, with yolk of egg and grape sugar, repeated three or four times each day for three days. The mouth should be cleansed with borax, thymol and warm water several times a day. The next grave matter which it is well to bear in mind is the liability of perforation, with alarming symptoms of pain and collapse, calling for immediate surgical action. Milk and lime water and cream are the safest for the first feeding by mouth. An ice bag may be kept on the epigastrium as long as bleeding remains active. As to medical treatment, subnitrate of bismuth and calcined magnesia are the best agents, twenty grains of each after a few days when the bleeding is stopped. The stools should be watched for melena. Calcium lactate and adrenalin have both been suggested, but the author believes that we may dispense with any of these drugs if we carry out the physiological principles. Gastroenterostomy should be performed in cases where ulceration is found near the pyloric orifice on opening the stomach, for this condition may lead to dilatation and other difficulties. Hematemesis depending on advanced cirrhosis of the liver is always a serious and often a terminal symptom in such subjects. The bleeding is sometimes enormous, and should be treated along the same lines. Patients suffering from gastric hemorrhage are always likely to do best in hospitals, for here they have skilled watching.

Skin Inunction. By Lawrence F. Flick. *Monthly Cyclopedia.* Abstract in *Cleveland Med. Jour.*

Dr. Flick considers skin inunction as a therapeutic measure. The skin has the power of absorption, not as one of its chief functions, but secondarily and for protective purposes. The disease in which medication by skin inunction has received most general recognition is syphilis, but for 20 years he has used the inunction method in the treatment of tuberculosis and his experience with it has been most satisfactory. He has applied iodine in this way: he first used iodoform dissolved in cod liver oil and olive oil by inunction and the result seemed better than any he had obtained by any other medication given in any way. Incipient cases of tuberculosis seemed to recover in a relatively short time, so short indeed that one got the impression that recovery depended on the inunctions. The one serious objection, however, was the odor, and a few years later when cresoliodide was put upon the market he found it a very satisfactory substitute for iodoform in effect, with the advantage of freedom from odor. He has since then used it in inunction as a routine treatment in all cases of tuberculosis, and like iodoform it gives striking results. While difficult to demonstrate that these results are due to the iodine, he is convinced, after a long experience with iodine inunction in tuberculosis, that it is a valuable method of treatment. Other forms of iodine than cresoliodide and iodoform can be used for inunction. Iodized oil which is much cheaper than solution of cresoliodide gives satisfaction, but does not seem to him to be as useful as the latter. Most iodine compounds are soluble in cod liver oil and olive oil in the proportion of about one dram to two and one-half ounces. In essential oils, such as oil of anise, oil of gaultheria and the like, they are soluble in the proportion of one dram to two ounces. They have about the same solubility in hydrous wool-fat. In prescribing preparations of this kind an effort should be made as far as possible to make them agreeable and pleasant to the sense of smell. He uses oil of anise and oil of gaultheria in his prescriptions, and thinks it possible that these may have a medicinal influence. In recent years he has extended his inunction treatment with marked benefit to the pharynx in those cases in which there is a chronic granular pharyngitis. In tuberculosis this unhealthy condition of the lymphatic tissue of the pharynx and postnasal space, apparently due to a mixed infection of some character, occurs quite often. It is a great source of annoyance to the patient and appears to be an impediment to recovery. It is a troublesome condition which does not readily

yield to treatment. He has found inunction of these parts, especially around the tonsils, with a saturated solution of cresol-iodide in equal parts of oil of anise and oil of gaultheria the most effective treatment. He applies it on a little cotton, rubbing it in vigorously.

Ophthalmology

D. N. Maclennan, W. H. Lowry.

The Fitting of Glasses by the General Practitioner. By Emerson W. Ayers. *Medical Times*, Dec., 1910.

The author says, in relation to the relief of eye-strain: "No one thinks of applying to a mechanic for the relief of a club foot: and why should the application of lenses to a defective eye be turned over to a mechanic, who has no notion whatever of the structure and operation of the eye, in either health or disease? A large number of the people in the rural districts find the visit to an oculist, who resides in the city, an utter impossibility. They cannot afford either the time or the expense of a trip to the city, the smallest part of which is often the fee of the oculist. This class of people need the assistance to be derived from glasses just as much as those better favored, either in means or environment. They look in vain to the medical man of their acquaintance for help, and they will purchase glasses from whomsoever offers them for sale. The jeweler has seen what looks to him a legitimate commercial opportunity, which he has not been slow to improve. This has turned a profitable part of the legitimate practice of medicine into other channels. The doctor misses what is rightfully his, and the visual organs of the people are being tinkered by pretenders, to the great damage of the vision of the victims.

The people must and will have glasses, and not being able to procure them from legitimate sources, they get them where they can. Let this be made emphatic. If the medical profession fails in any particular to supply what is needed by the public, that thing will be procured by the public from some other source, to the shame and disgrace of the doctor.

I see but one remedy. That is for the general practitioner to qualify himself for the correction of errors of refraction. He can serve the people in his locality, in this department of practice, as well as in others. When he finds a case of serious disease, requiring operation, or skilled treatment, he can refer it to a man who has had experience in that line. The time has gone by when a general

practitioner can claim any standing or credit among his people by denying all knowledge of the eye. He is expected to know.

W. H. L.

An Ophthalmological Phase of the Dangers of Consanguineous Marriages. By Posey and Sauter. *Ophthalmic Record,* Sept., 1909.

Statistics show that at least four per cent. of the blind and deaf, and seven per cent. of all idiots are the children of consanguineous parentage, and that these defects are transmitted through many generations. In view of these facts the authors emphatically condemn the marriage of cousins. W. H. L.

Symptoms of Intoxication After the Use of Atropine in Children's Eyes. By Elsner. *Review, Archives of Ophthalmology,* Sept., 1910.

The author observed toxic symptoms after instillation of a one-half per cent. solution of atropine into the eyes of several children, and traced them to the hyoscyamine, which was mixed with the drug. Care should be taken to use only atropine that is free from the more poisonous hyoscyamine. W. H. L.

A Note on Alypin. By R. H. Elliott. *Ophthalmoscope,* 1909.

Major Elliott, working at Madras, gave alypin a trial upon a day when nineteen extractions were to be performed. A two per cent. solution was given, five instillations being used, at intervals of five minutes. Alypin proved most unsatisfactory, the patients felt severe pain, and there was unusual hemorrhage. The drug dilated the pupil, but not so much as cocaine. For pterygial operations, alypin seemed more suitable, complete anesthesia being maintained, but hemorrhage was more troublesome than with cocaine. Adrenalin was used with each drug. The author sees no reason to use alypin instead of cocaine. W. H. L.

Gynecology

F. W. Marlow, W. B. Hendry.

Backache. By Dr. Edward Reynolds and Dr. Robert W. Lovett, of Boston. *Journal of the American Medical Association.*

The paper is the outcome of an experimental study of certain phases of chronic backache. To appreciate its full value it would need to be carefully studied in its entirety.

The term "static backache" is introduced, and evidently wisely so, to indicate a large class, for which no other explanation can be given than that they persist as the result of muscular and ligamentous strain in the dorsal region, owing to abnormal attitudes of body or other static defects.

It is pointed out that such defects may arise de novo, or may be the result of attitudes assumed in the presence of various visceral diseases, affecting especially the abdomen or pelvis. Relief of such conditions by appropriate means will often cause the backache to disappear, though at times it will be necessary to give attention to the correction of the abnormal static condition.

In the main, the conditions described have the effect of displacing the centre of gravity of the body forward, and such displacement results in a more or less continuous effort on the part of the dorsal muscles to maintain equilibrium.

As the result of numerous experiments, the authors have arrived at what appears on careful study to be a simple and satisfactory method of locating the centre of gravity of the body and of making tracings of various attitudes as they exist, or as affected by various procedures. Their findings show a close correspondence to the results of clinical observations.

As to the location of the centre of gravity, they find that in the erect position of the body it lies in front of the ankle, knee, sacro-iliac and most of the vertebral joints. Its exact relation to the hip joint has not been accurately determined on account of the difficulty of exactly locating the acetabulum in the living individual. From experiments on the cadaver, they conclude that the centre of gravity is anterior to the hip joints, and so in the erect position the trunk is held extended on the legs by the combined and continued

action of the posterior musculature, the chief factors being the hamstrings, the glutei and the erector spinæ muscles. Any condition displacing the centre of gravity forwards would necessarily increase the strain on those muscles.

The authors concluded that under such exaggerated conditions the displacement backwards of the centre of gravity would bring about relief. Corsets of various kinds were experimented with, and it was found that various kinds produced different effects. "Neutral" corsets had practically no effect. "Bad" corsets had the effect of displacing the centre of gravity backwards, but as the hips were carried much further back than the shoulders, the result was detrimental. "Good" corsets displaced the centre of gravity backwards, by carrying the shoulders and hips back to an equal degree, thereby giving tracings resembling the normal, and in cases where properly fitted and adjusted were effective in the relief of backache.

The features of "bad" and "good" corsets are described in the paper. As the paper is practically limited to a discussion of the effect of corsets on the centre of gravity, other means of affecting the position of that centre are not discussed, except for a brief reference to the effect of high heeled shoes, which, by tilting the whole body backwards by their action on the ankle joints, not infrequently give relief to backache.

There can be no doubt that backache as a symptom should receive much more careful investigation from the profession than it ordinarily does.—Ed. F. W. M.

Genito-Urinary Surgery

T. B. Richardson, W. Warner Jones.

When to Operate For Enlarged Prostate, With a Review of Six Hundred Cases of Total Enucleation of That Organ. By P. Johnston Freyer, M.D., of London, England. *Journal of Dermatology and Genito-Urinary Diseases.*

In the September issue of the above mentioned Journal an article with the above title appears from the pen of the eminent surgeon, Johnston Freyer, in which he reviews his results, during the past eight years, after total Enucleation of the Prostate. He first proceeds to answer the question, "At what period in the history of this disease is it advisable to have recourse to surgical operative interference?" but before so doing he proceeds to take into account the following considerations: (1) The specific symptoms dependent on the prostatic enlargement from which at the time the patient is suffering. (2) The nature, size and general conformation of the prostatic growth.

Patients suffering from prostatic symptoms will be found when they apply for surgical relief to come under one or other of the following types:

(1) Patients suffering the usual symptoms of prostatic enlargement in the earlier stages of the malady, in whom on examination not more than an ounce or two of residual urine is found on introducing a catheter.

(2) Those who have probably suffered from prostatic symptoms for several years, in whom we detect a quantity of residual urine varying from three to ten ounces, or even more, but who have never employed a catheter for the purpose of emptying the bladder.

(3) Patients suffering from over-distension of the bladder, with extreme frequency of micturition, possibly continuous dribbling of urine, particularly at night time when asleep, but who have never been relieved by a catheter.

(4) Those cases in which the conditions described in paragraph three have culminated recently in complete retention of urine, and in whom great difficulty is experienced in introducing a catheter.

(5) Patients who from time to time have had retention of urine, which was relieved by the catheter, but who have not employed this instrument as a routine practice to empty the bladder daily.

(6) Patients who for weeks, months, or even years, have employed the catheter daily, once, twice or oftener for emptying the bladder, but who still retain the power of passing a certain quantity of urine naturally.

(7) Those entirely dependent on the catheter for emptying the bladder. In the advanced stages of the disease patients of this type rarely escape from recurrent attacks of one or more of the following complications, viz., cystitis, pyelitis, hemorrhage, vesical calculus, recurrent attacks of fever with rigors, and difficulty in introducing the catheter.

In the first of these types it will, as a rule, be unnecessary and inadvisable to attempt the removal of the prostate: because in the first place the symptoms will probably not be sufficiently irksome to warrant such an operation, and, secondly, the enlargement of the organ will not have sufficiently advanced to render it prominent in the bladder, or to define adequately the lines of cleavage between the true capsule and the enveloping sheath. But in one and all of the other types the removal of the prostate should be entertained and advocated if, on examination, it presents those characteristics—to be presently described—that render its enucleation entire in its capsule practicable, there being no condition of the general health of the patient to negative an operation of this magnitude.

Freyer says: "I cannot too strongly urge early removal of the prostate when there is decided enlargement of this organ, giving rise to urgent symptoms necessitating the employment of the catheter, before grave complications supervene. When undertaken whilst the patient's general health is sound and the kidneys are unaffected there is practically no danger attaching to the operation in experienced hands. But when once complications set in, and particularly when the kidneys become diseased, whether through backward pressure of the urine on these organs or from extension upward of inflammation from the bladder, the operation must necessarily be attended by considerable risk.

Another grave danger attached to postponement of operation is this, that recent experience has demonstrated beyond doubt that the adenomatously enlarged prostate, which is, of course, a benign growth, has a tendency to assume a cancerous type under the irritating influence of the catheter and complications incidental to catheter life."

In order to ascertain whether the prostate is capable of being enucleated entire in its capsule, the patient, if capable of passing

any urine naturally, is directed to empty his bladder as far as possible, and is then placed on a couch in the recumbent position. The bladder is then emptied of its residual urine by means of a catheter. The forefinger of one hand, previously lubricated, is slowly introduced into the rectum, and when the sphincter ani is thoroughly relaxed, a survey of the rectal aspect of the prostate is made. If the organ is found to be decidedly enlarged, presenting a well marked tumor in the rectum, more or less rounded in shape, bilobed laterally, with a well marked furrow in the median line, smooth on the surface, soft or somewhat dense to the touch, and (most important of all) movable, you know that you have to deal with the ordinary adenomatous enlargement of the gland of advanced life. If, in addition, from its prominence in the rectum you estimate the tumor to be at least of the size of a Tangerine orange, the case may be regarded as in all probability one in which the prostate is capable of being enucleated entire.

Freyer next suggests a bimanual examination of the prostate. By placing the fingers of the other hand on the hypogastrium and pressing them well down behind the pubic arch, directing the patient to relax the muscles, and at the same time making circular pressure with the finger in the rectum, if the prostate is decidedly enlarged it will be felt between the fingers of the two hands and can be slightly moved upwards and downwards or from side to side, like a chronically enlarged uterus, but to a less extent. In thin subjects this method of examination is easily accomplished, but is less satisfactory in stout subjects. Where the prostate can be readily made out by this method one may at once pronounce the case to be one in which the organ can be enucleated entire in its capsule, no matter what magnitude it may have attained. Prostates weighing from two to six ounces are those most easily and rapidly enucleated.

Contrasting the characteristics of the adenomatously enlarged prostate with those of cancer of that organ he makes the following observations. In cancer there are:

a. Intense hardness.

b. Outline irregular and median groove obliterated.

c. The organ presents a nodular surface.

d. The prostate will be immovably fixed in the pelvis, owing to the invasion by the growth of adjacent tissues.

e. Invasion of glands—enlargement—of the inguinal group (in advanced stages), and the presence of small, hard, sago-like grains, felt per rectum, covering the surface of the growth beneath the rectal mucous membrane (in earlier stages).

f. Rapid development of prostatic symptoms, and typical cancerous cachexia.

In the entire series of 600 cases there were 37 deaths, in periods ranging from 6 hours to 37 days after the operation, or a mortality of 6.15 per cent. The causes of death were: Uremic symptoms due to chronic kidney disease, 16; heart failure, 6; septicemia, 2; shock, 3; exhaustion (kidneys much diseased), 1; mania, 2; malignant disease of liver, 2; heat stroke. 1; pneumonia, 1; acute bronchitis, 1; pulmonary embolism, 1; cerebral hemorrhage with paralysis, 1.

Though all these deaths are accepted in connection with the operation, in not more than half the number can the fatal result be attributed thereto, the remaining deaths being due to disease incident to old age and unconnected with the operation. In 108 cases vesical calculi were removed at the same time.

In the successful cases there was complete restoration of bladder control, no relapse of the symptoms, and no diminution in the sexual power after the operation.

T. B. R.

Anesthetics

SAMUEL JOHNSTON, M.A., M.D.

Concerning General Rachianesthesia. PROFESSOR THOMAS JONNESCO, Bucharest. *American Journal of Surgery.*

In reply to an editorial in *The American Journal of Surgery,* January, 1910, entitled "Jonnesco's Contribution to Spinal Anesthesia." Professor Jonnesco calls attention in the February number of the same journal to some points he wants emphasized.

He says that his method should not be confused with lumbar rachianesthesia, conceived by Corning and popularized by Bier. He claims his method to be new and distinctive, because he has generalized spinal anesthesia, adapting it to *all operations*, on *any* part of the body.

He secures the anesthesia by piercing the spinal column at all levels and by adding strychnine to the anesthetic—stovaine, novocaine, tropococaine, etc., and emphatically denies Corning's right to be called the inventor, as the difference in the two methods will not allow comparison. He objects to the editorial being written with reference to only four cases injected at Mount Sinai Hospital, New York, while nothing is said of twenty-three cases demonstrated in various cities of the United States.

Of these four cases, one patient operated on for tumor of the breast experienced pain, and that, therefore, the anesthetic was not complete. He claims that this patient did not feel pain, for he made no resistance either with upper or lower limbs, the upper being paralyzed, he claims, proving anesthesia.

(Query.—Does paralysis of the motor nerves mean also complete paralysis of the sensory?)

He attributes this complaint of pain to the mental impression made upon the patient. He also performed two superior spinal tappings without result, which he says very rarely happens. If it had been his own clinic he would have tried it again, but he did not do it in these cases, as he did not deem it right to prolong a demonstration that was conclusive from three others. The method, to be successful, must be practised regularly to learn the technique and to acquire the skill in manipulation and ability to employ proper doses, according to patient's age and constitution.

He claims that by this method the respiratory nerves are not involved, although all the other nerves of that spinal region are paralyzed, and this is due, he thinks, to the influence of the strychnine.

The injection of stovaine alone in the superior dorsal region stops respiration, even with small doses.

His theory is that, the mixture containing strychnine when injected, the strychnine has a selective power, acting first on the respiratory and cardiac nerves, as well as upon the centres.

These nerves being stimulated by the strychnine, are no longer influenced by the stovaine or other anesthetic.

Recent Progress In Anesthesia. By James Taylor Gwathmey. *The Medical Record.*

After defining what he considered "recent progress," Dr. Gwathmey goes on to say that the basis of his work is founded on the theory of narcosis, formulated by Professor Hans Meyer, of the University of Vienna, which he quotes as follows:

"The narcotizing substances enter into a loose physicochemical combination with the vitally important lepoids of the cell, perhaps with the leeithin, and in so doing change their relationship to the other cell constituents, through which an inhibition of the entire cell mechanism results, and the narcosis immediately disappears as soon as the loose, reversible, combination dependent on the solution tension breaks up. Further, substances chemically absolutely indifferent, as the volatile saturated hydrocarbons, can act as narcotics."

In experimenting on animals he found, as a result, that oxygen increases the value of all anesthetics as regards life, without decreasing their anesthetic effect.

Again, he found that it took just twice as long to kill with the warm anesthetic as with the cold. Warm chloroform and oxygen are safer than ether and air, although the safety of all anesthetics is proportionately increased by the addition of oxygen and by warming. Heat is also indicated to assist in more rapid recovery after the anesthetic and to prevent nausea and vomiting.

Electrical Sleep:—Electrical anesthesia has not been practical for clinical use, but it may be employed, by means of the Leduc apparatus, in the laboratory instead of chloroform and ether. The sequestration method of Dawborn is described. According to this method, the patient is thoroughly anesthetised, after which the thighs are corded, thus cutting off this amount of blood from the brain. The patient is placed in a sitting posture, and only a very small amount of the anesthetic need be given from time to time. In fifteen minutes from the commencement of the anesthesia, the cords are gradually loosened. This method is used in operations on

the head and neck, but is contraindicated in patients with a weak heart.

Dr. Gwathmey speaks of Anesthetic Shock, which he maintains occurs in fifty per cent. of surgical cases, either before they reach the table, during the induction period of the administration, or afterwards from an overdose of the anesthetic.

In the first two instances the psychic element predominates to such an extent that patients have died from fright even before any anesthetic is given.

This serves to show that patients need preliminary treatment, both mental and medical, to eliminate this psychic element.

Medication should consist of morphine alone, morphine and hyoscine, morphine and chloretone, or an enema of one ounce of whisky and seven ounces of saline solution.

Children, old persons, the insane, the feeble-minded, obstetrical patients, and individuals in a state of coma, should not be so treated.

For the administration of morphine, the following rules should be observed:

(1) When given, it should be given before, instead of after the operation.

(2) All athletes and alcoholics should have this preliminary dose of morphine.

(3) The very old, and the very young, if morphine is given at all, should be administered with great care.

(4) Whenever morphine is administered, a lighter narcosis should be maintained than when this drug is not employed.

Ninety per cent. of fatalities occur in the early stages of anesthesia with men in robust health. In the light of these statistics, it is almost criminal to place an alcoholic or an athlete on the table without endeavoring to eliminate the element of fear, by the use of small physiological doses of morphine.

With this use of morphine vomiting is prevented, the patient takes more kindly to the anesthetic, on account of the whole nervous system being obtunded, the kidneys and lungs have been saved unnecessary irritation by reducing the amount of the pulmonary anesthetic, and finally the anesthetist is able to discontinue the anesthetic much earlier.

One or two quarts of normal saline solution per rectum lessens the thirst which comes from the morphine, assists the kidneys, and brings the patient out in a better condition than when neglected.

For a sedative, an enema of one ounce of brandy, and seven ounces of saline solution is better than a repeated dose of morphine.

Morphine is also strongly indicated before local anesthesia, and spinal analgesia, as it is in a certain measure an antidote to cocaine and allied drugs.

Atropine may be used as a preliminary when chloroform or ethyl chloride is to be used, as it maintains respiration and prevents profuse salivation, nausea, vomiting.

The latest and best development in pulmonary anesthetics is the use of oxygen and nitrous oxide gas, supplemented, if necessary, by small amounts of ether and chloroform.

There are several apparata in the market for this administration. It has been found that eighty per cent. of all surgical cases can be anesthetised by this combination.

Rectal Anesthesia:—After much experimenting with this method of narcosis, Dr. Walter A. Sutton, of Kansas City, perfected a system when he was interne in Roosevelt Hospital. The essential points are: (1) A mercurial manometer to prevent too great pressure within the colon, (2) A generator for the accurate admixture of oxygen and ether, (3) Two separate tubes, one for conveying the vapor into the colon, and one for withdrawing excess vapor, and also for trapping excreta. The whole apparatus is so arranged that it is controlled by the anesthetist, who sits at the head of the table.

Definite intestinal lesions are said to be the only contraindication to this method.

The bowel is cleansed by a castor oil purgative at night, followed in the morning by 3 or 4 high soap enemata, given one and a half hours apart, until the fluid from the rectum returns clear.

Spinal Analgesia:—This method, although in use in selected cases, will never supplant pulmonary anesthetics.

By preliminary medication with morphine, nervousness, physical and psychical pain, nausea, headache, etc., are in a measure overcome. The points in its favor are, that the patient assists the operator by coughing when necessary, and that the service of an assistant may be dispensed with, which is particularly applicable in emergency, naval and military surgery.

With regard to the use of the ordinary anesthetics, chloroform is contraindicated as a preliminary anesthetic when the psychic element is present, then it should be given as a sequence to ether.

Ethyl chloride is particularly useful for alcoholics, athletes and the obese, although not so safe as nitrous oxide gas.

He pleads for special anesthetists to be attached to every hospital, and deplores the fact that internes and even nurses are allowed to administer anesthetics without being under the direction of experts. S. J.

THERAPEUTIC TIPS.

Paralysis Agitans.

Berkeley (*Medical Record*) uses parathyroid nucleoproteid capsules of 1-50 of a grain each, giving two a day. It will also give good satisfaction in any form of tetany where the stomach can retain food. If not the remedy can be used in sterile hypodermic form.

Phimosis in Children.

Stuhl (*Deutsche med. Woch.*) describes a so-called bloodless operation, where no cutting instrument is used. Gradually the foreskin is pulled back over the glans at one or several sessions. When the meatus is exposed, adhesions are separated by a blunt sound. Paraphimosis is to be avoided by replacing the prepuce. From four to eight days are required for the treatment, a very narrow preputial orifice being gradually dilated. No narcosis is required. If frenulum is short it should be incised.

Dosage of "606."

McIntosh and Fildes (*The Lancet*) inform us that Ehrlich in the earlier cases advised a dose of 0.3 gramme. It was found that this quantity was insufficient. The amount usually given now for an average adult is 0.6 gramme. More may be given without ill effects, but so far larger single doses appear to be unnecessary.

Anterior Poliomyelitis.

Stern, Cleveland (*C. M. J.*), says the treatment of anterior poliomyelitis has undergone a complete change in the past two years For the acute cases he employs absolute rest to the spine, preferably in a plaster bed; proscribes all counterirritants; general treatment same as for other acute infectious diseases. Right at the first splint carefully the paralyzed limbs to protect from injury and prevent deformity. The child should be kept in bed for a year at least and should not be allowed to walk when a partial recovery takes place. Massage and galvanic electricity are valuable in keeping up tone of muscles; faradic current from small batteries is useless, as the nerve shows the reaction of degeneration, and will, therefore, not respond to the faradic stimuli.

Reviews

The Physician's Visiting List, 1911. Philadelphia: P. Blakiston's Son & Co.

With the present issue "The Physician's Visiting List" enters upon the sixtieth year of its existence. Only those publications of decided merit outlive the generation with which they were born, and by far the larger number disappear after a few years of struggling existence.

During the life of this book medical science has made greater progress than during the preceding five hundred years.

It has been seen and used by the most famous of American physicians and investigators, as well as by thousands of others, whose names perhaps were never known beyond their own local scenes, but who, nevertheless, have done a large share toward the total sum of human happiness. It has made long journeys in the buggy or saddle bags of the country doctor. It has been at the birth and alongside the deathbed of rich and poor, famous and infamous alike. Its volumes hold the life records of numberless practitioners.

It is needless for the publishers to say that they take great pride in its stability; that they recognize in its success an appreciation of sixty years of effort on their part to provide a useful book, and that they realize the help and encouragement that has been given them by the profession for whom it is intended.

Canadian Almanac. 64th year of Publication. Toronto: The Copp-Clark Co.

The Canadian Almanac is such a well-known publication that scarcely any praise is needed in its favor. In it we see law lists and lists of clergy, and we would like very much to see incorporated a medical and dental directory of all Canada. Of great value to the medical profession now for the great mass of information it contains, it would be infinitely more so as well as to manufacturing concerns dealing with these two professions, if up-to-date medical and dental lists were included.

Syphilis. Special Number Interstate Medical Journal for January, 1911, Metropolitan Building, St. Louis, Mo.

Original Articles: Present Status of the "Noguchi Test," Hidego Noguchi, M.D., New York. On the Means of Finding the Spirocheta Pallida, with Special Reference to the India Ink Method (from the Laboratory Michael Reese Hospital), J. S. Cohn, M.D., Chicago. The History and Methods of Application of Ehrlich's Dioxy-diamido-arsenobenzol (from the Royal Institute for Experimental Therapeutics), Lewis Hart Marks, M.D., Frankfort, a/M. Recent Progress in the Treatment of Syphilis, H. Hallopeau, M.D., Paris. Treatment of Syphilis with Ehrlich-Hata "606," Abr. L. Wolbarst, M.D., New York. Syphilis of the Nervous System, Ernest Jones, M.D., Toronto. Syphilis and Pulmonary Tuberculosis, Robert H. Babcock, M.D., Chicago. Syphilis as a Cause of Pauperism, A. Ravogli, M.D., Cincinnati. Giant Cells in Syphilis, John A. Fordyce, M.D., New York. Personal Observations with the Ehrlich-Hata Remedy "606," B. C. Corbus, M.D., Chicago. Syphilis and the Public, Isadore Dyer, M.D., New Orleans. Sanitary Regulation of Prostitutes, Prince A. Morrow, M.D., New York. The Scaphoid Scapula Syndrome: Its Connection with Syphilis in the Ascendants, William W. Graves, M.D., St. Louis.

Collective Abstracts (Critical Reviews of Recent Literature in Collective Form): Ehrlich-Hata "606," Wm. Engelbach, M.D., of the Editorial Staff. The Cerebrospinal Fluid in Syphilis and Parasyphilitic Diseases, S. Strouse, M.D., of the Editorial Staff. Serum Diagnosis of Syphilis, Carl Fisch, M.D., of the Editorial Staff. Diagnosis of the Osseous Lesions of Syphilis by the X-Ray, E. H. Skinner, M.D., Kansas City, Mo.

In addition to the above, the January number will present the usual features which have made the Journal so favorably known to the profession.

Subscriptions for 1911 will begin with the Special Syphilis Number, which will be issued early in January. The subscription price is $2.00 per annum.

Diseases of the Pancreas. By Eugene L. Opie, M.D. Second Edition. Philadelphia, London and Montreal: J. B. Lippincott Co.

I have revieved with much pleasure the new edition of Opie on the Pancreas.

The book is well arranged. There are numerous plates and diagrams, and the numerous photographs illustrating diseased conditions of the pancreas are excellent. The work is a splendid review of the literature on the pancreas, including both physiology and pathology.

The author's own work on acute and chronic pancreatitis and diabetes mellitus are of particular interest and should be read by every physician and surgeon. W. W. J.

Syphilis. By Sir Jonathan Hutchinson, F.R.S., LL.D., F.R.C.S., Consulting Surgeon to the London Hospital and to the Royal London Ophthalmic Hospital. New and enlarged edition, with many colored and black-and-white plates. 583 pages. 1909. $3.25. London: Cassell & Co. Toronto: D. T. McAinsh & Co.

Although not saying the last word or even the latest pronouncement as regards treatment, the eminent standing of the author will ensure this book as a practical hand-book of syphilology. We commend it to general practitioners and students of medicine as a concise and accurate exposition of the subject.

A Manual of Chemistry. By Arthur P. Luff, F.R.C.P., Physician to St. Mary's Hospital and Joint Lecturer on Medicine at St. Mary's Hospital Medical School, and Hugh C. H. Candy, F.I.C., Lecturer on Chemistry in the London Hospital Medical College. New and enlarged edition. Illustrated. 622 pages. 1910. $2.25. London: Cassell & Co. Toronto: D. T. McAinsh & Co.

An examination of this book proves that we can recommend it highly to medical students and others who wish to secure a good, practical knowledge of the subject. It is right up-to-date and exceedingly well set out. It will fill the bill as a practical working hand-book of any student of medicine.

The Mac's of '37: A Story of the Canadian Rebellion. By Price-Brown, M.D., Toronto, Author of "In the Van," etc. Toronto: McLeod and Allen.

This is a story, as the title announces, of the stirring and troublous times of '37. Interest is better sustained in the latter than in the first part. The dialogue is rather jerky at times, but there is a good deal of matter throughout.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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GEORGE ELLIOTT, MANAGING EDITOR

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VOL. XXXVI. TORONTO, JANUARY, 1911. No. 1

COMMENT FROM MONTH TO MONTH.

Salvarsan—("606")—the name we take from "Current Comment" in the *Journal of the American Medical Association*—is to be marketed in the United States and Canada some time in January. There is evidently a wide-spread lay interest in this product, as evidenced in special articles in magazines and the public press. It is to be sincerely hoped that the marketing will be done through a very responsible house.

As quacks thrive upon the treatment of syphilis, skin diseases and genito-urinary diseases, they will be wise to this new production. Some have even already anticipated the treatment by "606" by exploiting something not "just as good," but far better, namely 1212.

The profession of medicine on this side the Atlantic Ocean should have some specific assurances from Professor Ehrlich that the remedy—to all accounts it now appears to be such—will not get into the hands of the laity except through the channels of regular medicine. The warning cannot, therefore, be too often or too strenuously sounded that the administration of Salvarsan is not unattended with danger, and especially so in inexperienced hands.

Through its Pharmacology Department the American Medical

Association seeks to safeguard the American profession as well as the afflicted themselves. From its examination by this body the chemical properties are scientifically fully set out, and those who propose its use should well qualify their knowledge in this direction. It is only by such means as this, along with its clinical usage, that its true therapeutic status may be determined.

Apparently there is every reason to state that its preparation for hypodermic administration should be supervised by trained laboratory men, and such being the case it will be wise on the part of the physician who may now be daily importuned to administer it to some anxious and fretful patient, to have it so administered under hospital auspices, and especially so if it is administered intravenously, which is said to be the better way.

Special examinations of the eyes, heart, liver, blood and urine are demanded, and it is said on competent authority that to those only who are organically sound, will its administration be free from danger.

Deaths From Tuberculosis In Ontario.—The educational campaign, the establishment of sanatoria, dispensaries, etc., seem to be having some material effect in staying, if not reducing, the ravages of tuberculosis in this province.

In the 39th annual report of the Registrar-General for the year ending 1908, the deaths from tuberculosis in that year numbered 2,511, of which 155 were infants under one year of age.

The largest number of deaths in any one year was 3,484, which was in the year 1900. Each succeeding year gave the following numbers: 1901, 3,284; 1902, 2,694; 1903 ,2,723; 1904, 2,877; 1905, 2,667; 1906, 2,911; 1907, 2,530; 1908, 2,511.

From these figures it will be seen that the deaths in 1908 were 973 below those in 1900—the period when the best and most active work has been done in combatting the spread of the disease. This may well be considered encouraging, and is particularly gratifying, as in the last decade more people have been attracted to city life than ever before—and the statistics for the province give a death rate of 1.43 per 1,000 for the city group, 1.17 for the town group, and in the country 1.002 per thousand.

Can anything be plainer, therefore, that a still more active propaganda, the multiplication of sanatoria, dispensaries, day camps, etc., the diffusion of a more general knowledge through the lay press, lectures and exhibitions, as well as dissemination of

knowledge as to right living, fresh air, temperance, personal hygiene, home sanitation, pure milk, will result during the present decade in a yet greater diminution in the death rate and a larger decrease in the morbidity.

Cancer in Ontario.—Whilst tuberculosis is declining in Ontario, cancer is increasing. Towards reducing cancer nothing has been done, and the reason is all too obvious—its exact nature is not known to medical science.

The deaths from cancer are thus recorded: 1902, 1,048; 1903, 1,156; 1904, 1,253; 1905, 1,224; 1906, 1,411; 1907, 1,329; 1908, 1,348.

Having in mind, then, the undoubted good work which has been done in checking the spread of tuberculosis and the good work which may be done in checking the increase of cancer, there would appear to be every reason that the Government of the Province might wisely consider it a justifiable procedure to place a special competent official in charge of all the work pertaining to the prevention and spread of these two diseases in Ontario.

At The Beginning of a New Year the minds of the medical profession are very apt like those of other callings in life to take stock of the old or the past year.

Some like to recall the achievements medical science has brought about in the past twelve months; others recall the ravages of the man with the scythe; whilst yet others take a more mercenary view and take pleasure in counting up the shekels in the strong box—or bemoan their bad luck, if there are no shekels to count.

Having kept some tab on medical affairs financial, appearing as special articles and editorials in various exchanges, it looks very much as though the physician, meaning the general practitioner, is viewing a decreasing annual income with no inconsiderable alarm, and that he is looking around for the cause.

This is not far to seek. The multiplication of doctors, the abuse of medical charity, lodge practice, the inroads of sanitary science, specialism—these are all tending to abridge the work and the income of the man in general medicine.

The age is one where specialism in all departments of manufacture and commercial life is predominant; it is equally true of medicine. Sanitary science is on the up-grade, and will sooner or

later occupy a strong and commanding position. Our old friends medical charity and the abuse thereof and lodge practice are still strong and ever with us. Perhaps something could be done with benefit to the profession at large by combatting strenuously these two evils. Of the multiplication of doctors there seems no end. The outlook, therefore, is not a cheerful one.

The Ontario Medical Council has held its elections, but only a few new faces will be observed in the seats of the mighty—and most of these do not come as a result of the great amount of general dissatisfaction which was thought to be spread all over the province. As over half the electoral members were re-elected by acclamation or re-elected after contests, it is safe to say the great majority of the College are satisfied with the conduct of its affairs.

To Dr. Edmund E. King, Toronto, much sympathy is expressed at the untimely death of a well-beloved daughter.

The following are the members of the Ontario College of Physicians and Surgeons as returned at the recent elections: Dr. Cruickshanks, Windsor; Dr. Welford, Woodstock; Dr. McArthur, London; Dr. Emerson, Goderich; Dr. Vardon, Galt; Dr. MacCallum, Thornbury; Dr. Griffiths, Hamilton; Dr. Merritt, St. Catharines; Dr. Gibson, Sault Ste. Marie; Dr. Stewart, Fort William; Dr. King, Toronto (East); Dr. Hart, Toronto (West); Dr. Bascom, Uxbridge; Dr. Young, Peterboro; Dr. McColl, Belleville; Dr. Spankie, Wolfe Island; Dr. Lane, Mallorytown; Dr. Klotz, Ottawa.

Homeopaths.—Dr. Hardy, Toronto; Dr. Jarvis, London; Dr. Wickens, Hamilton; Dr. Adams, Toronto; Dr. Routledge, Lambeth.

News Items

Dr. C. J. Alloway, Montreal, has gone to Florida for the winter.

Dr. H. O. Redden, Outlook, Sask., has opened a private hospital.

Dr. F. N. G. Starr has returned to Toronto after a trip to Nova Scotia.

Dr. J. T. Rogers has returned to Montreal after an extended stay in Europe.

Dr. Norman King Wilson, College Street, Toronto, has gone to Edinburgh for graduate work.

Scarlet fever is epidemic in Winnipeg. In November there were 139 cases with 19 deaths.

The Government of British Columbia has given $5,000 and the City of Victoria $15,000 for isolation hospital purposes.

The Canadian Hospital Association will hold its next annual meeting at Niagara Falls, Ont., the 23rd and 24th of May.

Out of 2,051 cases of typhoid fever in the Montreal General Hospital from 1897 to May, 1910, there were 93 cases of perforation.

Dr. J. E. Laberge, Chief of the Infectious Diseases Department of the Montreal Health Department, has been appointed a member of the Quebec Board of Health.

Dr. W. B. Kendall, Superintendent of the Muskoka Cottage Sanatorium, has been granted leave of absence to study the latest phases of tuberculosis in Europe.

There are 92 students from British Columbia at McGill University. Two years of the university course may now be taken in Victoria and three years in Vancouver.

The death is announced of Dr. John C. Munro, Boston, Mass. Dr. Munro delivered the address in surgery before the Canadian Medical Association in Montreal in 1907.

The new Alberta Hospital for the Insane at Ponoka will be ready for occupation in April. The 150 patients from Alberta, at present in the Brandon Hospital for the Insane, will then be removed.

Dr. Vrooman, Winnipeg, formerly Superintendent of the Manitoba Tuberculosis Hospital, has been appointed Superintendent of the Tranquille Sanatorium in British Columbia, Dr. R. W. Irving resigned.

Dr. Geo. E. Armstrong, Montreal, President of the Canadian Medical Association, read a paper on the surgery of gastric ulcer before the Academy of Medicine, Toronto, on the evening of the 3rd of January.

Correspondence.

Walkerville, Ont., Dec. 22, 1910.

Editor DOMINION MEDICAL MONTHLY,

203 Beverley St., Toronto, Ont.

DEAR SIR,—We ask your kind assistance in the way of disposing of a false impression which may have been created in the minds of your readers by wholly erroneous reports which have appeared in the *Montreal Star* (December 17), the *Toronto Globe*, the *Toronto Star*, and the *Toronto News* (December 15).

All four of the papers mentioned made the picturesque announcement that we had just declared a cash dividend of 15% and that, in addition thereto, we had paid during 1910 30%! This is perfectly ridiculous. During 1910 we paid exactly the same dividend that we declared in 1909, namely, 12½% of the par value of the stock, plus an extra dividend of 2½%. That is all there is to it. In other words, we are paying for 1910 15% instead of 12½% There is no "melon" in the case. Would that there were!

The purchaser of our stock at present market prices receives a return of less than 4% on his investment. Why an industrial stock —and, as you know, "industrials" are by no means the pets of prospective investors—should command a selling price so much above its par value, may be explained by reasons which are perfectly familiar to those who have employed our products: modesty forbids us to recite them!

Very truly yours,

PARKE, DAVIS & CO.,

Wm. M. Grant,

Manager.

Dominion Medical Monthly

And Ontario Medical Journal

Vol. XXXVI. TORONTO, FEBRUARY, 1911. No. 2

Original Articles

SALVARSAN (EHRLICH - HATA'S "606"; DIOXY - PARA-DIAMIDO-ARSENO-BENZOL.)

By Graham Chambers, B.A., M.B.

Associate Professor of Clinical Medicine, University of Toronto; Physician, Toronto General Hospital.

In recent years much has been done in the preparation and pharmacological study of organic drugs. The outcome of the work has shown that in many cases it is possible to foretell the pharmacological action merely from the examination of the structural formula of the drug. It has also been found possible to alter, in a fairly definite way, the pharmacology of a compound by the introduction of a certain radicle or group of elements into its molecule. Thus a substitution product in which the acetyl group CH_3CO is introduced differs pharmacologically, as a rule, in a fairly definite way from the compound from which it is derived. This is illustrated in the relations of acetanilide to aniline, aceto-salicylic acid (aspirin) to salicylic acid, aceto-phenetidine (phenacetine) to phenetidine, the acetyl derivative being in each case more analgesic and antipyretic in character. One might give many other illustrations of similar relations, all of which tend to show that there is frequently a fairly definite relationship between the structural formula of a compound and its pharmacological action. The study of these relations, which is called by some "chemico-therapy," is a very attractive one, and occupies the attention of many investigators, among whom may be mentioned Ehrlich and his co-workers, Hata and Bertheim, who have, for several years, been especially

interested in the preparation and pharmacological study of drugs which shall possess the power to destroy trypsanosomes and spirochetes without injuring the organs invaded by the parasites. I may mention that the general belief that malaria, syphilis, sleeping sickness and other affections caused by protozoa were not amenable to treatment by immune sera was a strong incentive to Ehrlich to pursue the work, and the fact that quinine and mercury were effective in the treatment of malaria and syphilis respectively augured well for the outcome.

The remarkable advance which has taken place in recent years concerning the pathogeny of syphilis has proved of great value to Ehrlich and his associate investigators. In 1904 a new era was inaugurated by Schaudinn and Hoffman's discovery of the spirocheta pallida. Shortly after, Metchnikoff and Roux demonstrated that syphilis could be communicated to apes, and later, Bartarelli found the rabbit was not immune to the spirochete. These discoveries made it possible to study the action of any drug on the spirochete in a rational manner. In this connection the work of Wassermann, Neisser and Bruck on the serum reaction of syphilitic patients should be mentioned as their test, which is now known as the Wassermann reaction, made it possible to determine whether or not a drug was effective in its action.

We shall now mention some of the reasons why Ehrlich experimented with arsenical compounds. First, it should be stated that arsenic is not a new remedy in the treatment of syphilis. Donovan's solution has been in use for many years, and, more recently, but prior to the reports of Ehrlich and Hata, attention was directed to the organic compounds of arsenic. Wolferstan Thomas, Koch and other investigators showed that atoxyl, which is the sodium salt of para-amidophenyl arsenic acid, was valuable in the treatment of a disease allied to syphilis, namely, sleeping sickness. Salmon, in 1907, called attention to the value of atoxyl in the treatment of syphilis.

The study of atoxyl may be said to be the first step in Ehrlich's research. He soon found that its toxic action prohibited its general use in the treatment of syphilis. Other preparations of arsenic were then prepared and experimented with, but, although many were less toxic than atoxyl, none came up to Ehrlich's ideal until the six hundred and sixth was produced. This compound is dioxy-para-diamido-arseno-benzol (Ehrlich-Hata's "606"). According to the experiments of Ehrlich this can be administered to a syphilitic animal in sufficient quantity to destroy the spirochetes without injuring the host. In other words, using Ehrlich's terminology it

is parasitotropic, but non-organotropic. In human beings the results have been almost equally good, as there have been only twelve deaths in 12,000 injections of the remedy. Moreover, it is believed that most, if not all of these fatalities, could have been prevented by proper technique and care in the selection of cases.

Remarks on the Chemistry and Methods of Administration of the Remedy.

Dioxy-paradiamido-arseno-benzol is an unstable solid, insoluble in water. It forms salts with both acids and alkalines, although it is usually described as a base—in this review this custom shall be followed. The salt formed with hydrochloric acid, dioxy-paradiamido-arseno-benzol dihydrochloride is the medicinal remedy ("606"). Recently this has been patented and is sold under the name of "Salvarsan."

Salvarsan is a yellow powder, which, on account of being easily oxidized, is sent out in sealed tubes, from which the air has been replaced by an inert gas. It dissolves slowly but completely in water, forming a solution, strongly acid in reaction. This solution is very irritating and should not be used intravenously, subcutaneously or intramuscularly.

The base is prepared by neutralizing a solution of salvarsan with sodium hydroxide. The neutralization point may be determined by means of litmus paper, a one per cent. alcoholic solution of phenol phthalein. The latter indicator is colorless with acids and red with alkalies, so, if after adding one or two drops of it to a solution of salvarsan, the solution of sodium hydroxide is slowly added, almost drop by drop, the first appearance of reddish color of the whole mixture will indicate that the liquid is neutral. The precipitate is unstable and should not be kept for any length of time. It should not, of course, be given intravenously, but may be administered subcutaneously or intramuscularly. If perfectly neutral it does not as a rule cause pain, but its therapeutical efficiency is questioned on account of slow absorption of the remedy from the area into which it was injected.

A solution of the sodium salt of dioxy-paradiamido-arseno-benzol can be easily prepared by adding a solution of sodium hydroxide to salvarsan dissolved in water, until the precipitate which is first formed is just dissolved. The product is usually described as an alkaline solution of salvarsan. It may be administered intravenously, subcutaneously or intramuscularly.

The intravenous injection, properly administered, is painless, but the subcutaneous and intramuscular may cause severe pain and a good deal of inflammatory swelling of the part.

The time required for the excretion of the arsenic administered intravenously is about three or four days, which is shorter than that after a subcutaneous or intramuscular injection. Indeed, after an intramuscular injection an arsenic deposit may form, which may not be absorbed for several weeks, a feature which is made use of by some physicians who advocate an intravenous injection, followed after two or three days by an intramuscular injection.

The writer's personal experience in the administration of salvarsan has only been with the subcutaneous and intravenous methods. In subcutaneous injections a perfectly neutral mixture of the base in suspension was used. After the injections the patients complained of pain and stiffness in the part, but the distress was not so severe as to require an opiate. All the local symptoms disappeared in from one to two weeks. The intravenous injections were made with an alkaline solution. These were carried out without causing the least pain, except in one case, in which, during the administration of the drug a small quantity was injected into the tissues around the vein, causing considerable inflammation and pain in the part. From this experience, and also from information obtained from physicians and medical literature, I should judge that either the subcutaneous or intramuscular injection of an alkaline solution of salvarsan would cause a good deal of suffering.

(*To be continued.*)

CARE OF THE TEETH.*

Prepared for the Canadian Oral Prophylactic Association.

Historical.

It is quite evident, according to researches made through the history of ages, that it has always been considered of more or less importance that the teeth, as well as other parts of the body, should be cleansed, in order that the individual might enjoy good health and the esteem of his fellows.

The earliest Chinese works on medicine show that eighteen hundred years before Christ some attention was given to the care of the teeth.

About 1500 B.C., some of the Hindu sacred works, as well as those on medicine, contained, among other laws of health, rules for the cleansing of the mouth after eating.

The early Romans, too, had knowledge of the advantages to be derived from the cleansing of the teeth. J. Grasset St. Sauveur, writing of these people in "L'Antique Rome," said: "In order to keep their teeth clean and white, they used a great deal of a certain liquid of curious composition. They knew the use of *small brushes* and toothpicks of gold, of silver and of quill." Jacob von Faulke, in "Greece and Rome, Their Art and Life," referring to the matter of growing old, says: "She resisted to the last, concealed her wrinkles, helped her figure with judicious padding, and replaced lost teeth by artificial ones of ivory, fastened with gold."

As early as the second century dentistry was a recognized art, but during the dark ages, with many other of the arts and sciences, it languished, and had it not been for the monks, to whom the later generations are greatly indebted for preserving records, it might have been lost sight of entirely. In fact, it is believed they did more or less to relieve suffering due to diseased conditions of the teeth.

With the exception of references to cleaning the teeth, history shows that about the only form of dentistry practised by the ancients was the restoration of lost teeth by artificial substitutes. In those times artificial teeth were very crude affairs, and the wearers were usually objects of ridicule. If the dentistry of to-day were not of such a high order we would probably take more care to preserve our natural teeth.

*With acknowledgments to Dominion Dental Journal.

The profession of dentistry has made very decided progress during the past fifty years, and has now reached a high state of

Fig. 1.—Worn behind the lips for appearance only.

perfection in the matter of repair of diseased teeth and the replacement of lost ones by artificial substitutes.

Dentistry of the Future.

A great deal of attention is now being given by scientific men to the study of prevention of disease in all its forms, and much success has already been achieved along this line.

In dentistry to-day the trend of thought is especially directed toward prevention of decay and other pathological conditions by a system of cleansing of the mouth and teeth and the regulation of the quality of the secretions. Oral prophylaxis is the name applied to this particular branch of dentistry, which is receiving more and more attention each year. It is believed that in time the chief energy of the thorough and up-to-date dentist will be expended along this line, in order that destruction of the teeth may be prevented. He will take particular care, too, to instruct his patients in the best methods of caring for and cleansing their mouths and teeth. The dentistry of the future will be a preventive rather than a curative treatment.

As we become more enlightened upon the subject of cleanliness, we will begin to reap more fully the benefits of its practice; in fact, we are now able to control to a great extent the spread of disease, by vaccination against some forms, purification of drinking water, food, etc., prevention of accumulation of filth, and cleanliness of our persons and surroundings generally.

A great many forms of disease are caused by germs which enter the body, chiefly through the mouth, which latter has been aptly termed "the vestibule to the whole system." The members of

the profession of dentistry realize this fact, and are putting forth their best efforts to take advantage of the opportunity, which is theirs, as guardians of the mouths and teeth of the public, to not only prevent destruction of the teeth by caries, but also to control, in a large degree, many other forms of disease.

It is confidently anticipated that by the intelligent practice of oral hygiene more will be accomplished to prevent decay of the teeth during the next twenty years than in all the ages that have gone before.

Functions of the Teeth.

The teeth have, among others, three most distinct functions, viz., mastication of food, assistance in articulation of words, and that of giving beauty and expression to the face.

Mastication.—This is the chief function of the teeth. The crushing of the food is not the only end accomplished in mastication, but during the process the glands situated in the mouth are stimulated to secrete large quantities of saliva; these fluids become incorporated with the food and perform the first step in digestion. If the teeth and other tissues of the mouth are in an unhealthy

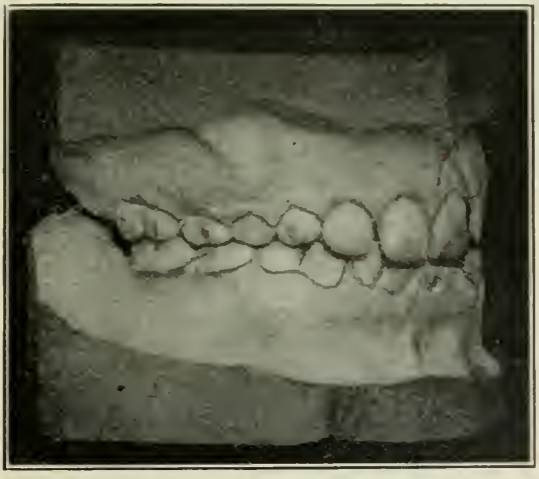


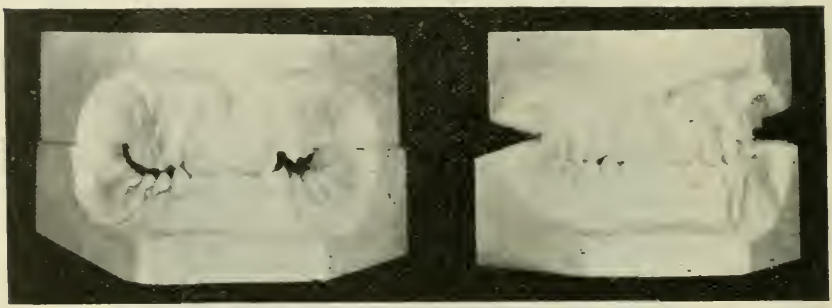
Fig. 2.—A normally arranged set of teeth.

state, their use is avoided, and the soft, pulpy articles of diet are chosen—those which will *slip down* with little or no mastication. In such cases the food is taken into the stomach without the normal quantity of saliva which is required in digestion. The food should be masticated until it is ground to the very finest consistency.

To give a little idea of what thorough mastication means, tender beefsteak should be crushed between the teeth about fifty or more times before swallowing; roast pork, thirty to forty times; tender chicken, thirty to forty times; bananas, which are usually bolted, and are very injurious on this account, should be chewed twenty times at least to give the salivary glands an opportunity to secrete sufficient saliva to help in digestion.

There is great power in the muscles of the jaws, some men being able to close their teeth together with a pressure of two hundred and fifty pounds. This power is there to enable the teeth to crush the food. Those people who have not such great strength in their jaws can develop it to a certain extent by thorough mastication, just as other muscles of the body are developed by exercise. Muscles in all parts of the human and animal anatomy are developed according to the demands placed upon them.

Mr. Fletcher's demonstrations of what can be done in the



Improper arrangement and closure of teeth.

Fig. 3.—Before correction. Fig. 4.—After correction.

preservation of health and strength by mastication has gained the attention of the scientific world.

Digestion is dependent not only upon the normal working of the stomach, but also upon other organs of the body. If the food is clean, properly prepared and well masticated before entrance into the stomach, the other organs are materially assisted in the work of digestion, but if the food is bolted and not mixed properly with the saliva, it will not be thoroughly digested, and as a consequence, tainted breath, headache and a train of other ill effects will follow.

Articulation.—The full complement of teeth in normally developed jaws is necessary for the distinct pronunciation of words, a matter of particular importance to public speakers and singers.

Nature is often interfered with in her work of development, resulting in malformations and irregularities of various kinds.

Cleft palate, for example, is a failure of the right and left halves of the upper jaw bones to unite in the median line; this leaves an opening between the mouth and the nasal cavity, and makes articulate speech and swallowing almost impossible. If the cleft is in the anterior portion of the bone, it may prevent the union of the tissues of the lip, a condition known as hare-lip, which is most disfiguring. Cleft palate is easily corrected in childhood by the

Fig. 5.—Cleft palate, before operation.

Fig. 6.—After operation.

surgeon, but may be remedied in some cases even in the adult. Where for any reason an operation to close the cleft cannot be performed, it is possible to have inserted by a dentist an appliance

which will cover the opening in the palate and improve articulation and deglutition.

Irregularity of the teeth also interferes with speech, particu-

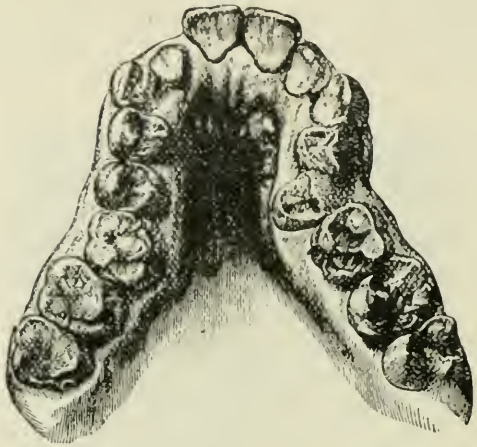


Fig. 7.—Narrow arch.

larly in those cases where the arch, or jaw, is very narrow. This narrowness of the arch is due also to lack of development of the bone. The work of correcting this condition is known as orthodontia, a science which has made rapid strides during the past

Fig. 8.—Depression of the mouth due to loss of the teeth.

ten to twenty years. In many of the large cities a few men are now devoting their whole time to orthodontia, but many dentists do more or less of it in their general practice. Irregularities of

the teeth should be corrected just as soon as they manifest themselves. The treatment is almost painless and fairly easy in the case of the child, but becomes more complicated and difficult as years advance.

The loss of even one tooth may affect the speech somewhat, and the result of the extraction or decay of several is sure to be disastrous. The posterior teeth are really more valuable than those in front, perhaps not from the standpoint of appearance or articula-

Fig. 9. Fig. 10.—Typical mouthbreather.

tion, but in general usefulness. Their loss, too, has more effect upon the face than most people realize.

Expression.—No organ, or set of organs, has greater effect upon the expression of the face than the teeth. If they are decayed or irregular, an otherwise beautiful face may be marred very decidedly. King Solomon, whose court was the home of fashion and beauty, alluding to beautiful teeth, said: "Your teeth are like a flock of sheep, even shorn, which comes up from the washing." Ovid, a Latin poet, recommended as an antidote to love, "to make her smile who has bad teeth." He also said to a young lady, "I

can perceive your attention to the graces by the whiteness of your teeth."

The cleanliness of our teeth is indicative of our tastes. A particular charm in many faces is the regularity and beauty of the teeth, giving to the mouth a natural and pleasing expression. If any are lost, or do not lock correctly with their antagonists when erupting, the natural development of the entire structure will be interfered with and irregularity will follow, changing more or less the whole expression. When a tooth is lost, those adjoining gradually tip into the space, and soon their usefulness is interfered with; it is this shifting of the teeth which often causes an irregularity. There is a correct position in the dental arch for each tooth, and if

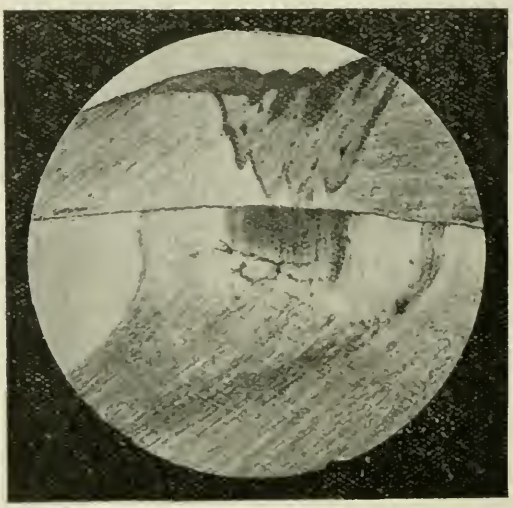


Fig. 11.—Decay of Dentine, the dark parts show masses of bacteria.

from any cause even one is misplaced, it is liable in time to affect the whole set. It is almost as great a loss to lose a tooth as to lose a finger.

Adenoids, an hypertrophy of the tonsil, situated at the back of the nose, a condition from which many children suffer, has often a very marked effect upon the teeth, and consequently upon the face. This enlargement of the tonsil closes the posterior openings of the nose, and the child is compelled to breathe through its mouth. If this abnormal respiration continues over a long period, the upper front teeth will protrude, and the lower lip roll in behind them. This disfigures the face very decidedly. The adenoids should be removed by the surgeon and the teeth drawn back to their normal

position by the orthodontist or dentist, so that the child can close its lips and breathe normally.

What is Decay of the Teeth, and What is the Cause?

Dental caries is a disintegration or breaking down of tooth tissue, resulting from the action of certain species of micro-organ-

Fig. 12.—Germs of tooth decay, magnified 1000 times.

Fig. 13.—Showing Gelatinous plaque under which the acid dissolves the tooth structure.

isms. Tooth decay is persistent; it goes on very rapidly in some mouths, and more slowly in others, according to the condition of the secretions, the general health and the care taken in cleansing the mouth and teeth.

Neglect of proper cleanliness of the mouth is one of the chief causes of tooth destruction, as well as other diseases.

Each germ disease, whether it be decay of the teeth, tuberculosis, or any other, is the result of the action of specific forms of bacteria. The warmth, moisture and presence of food in the mouth make it a desirable habitat for germs. In the average mouth each drop of saliva may contain between four and five thousand germs, and in a neglected one as many as one billion one hundred and forty million micro-organisms have been found. In almost any mouth there may be present the germs of many diseases, such as diphtheria, typhoid fever, cholera, pneumonia, tuberculosis, etc., and yet if reasonable care is taken in the cleansing of the mouth, and the general tone of the system is kept up, the individual may never contract any of these.

The particular germs which cause decay of the teeth do so in this manner: They seem to attach themselves to the smooth surfaces of the teeth by means of little gelatinoid plaques, and if surrounded by a suitable soil in which to grow, such as a collection of food, and are not disturbed, their action upon the food causes the production of an acid. It is this acid which destroys the teeth. The colonies of germs cover themselves in with the plaques which they form, and the acid which is produced by their action upon the food is held in contact with the teeth by these plaques, and is not diluted or washed away by the saliva. The acid first softens the surface of the enamel and thereby makes it rough, which facilitates the lodgment of more germs and the food in which they grow. The destruction goes on until the enamel is penetrated and the dentine reached. This latter part of the tooth is less dense than the enamel, and is destroyed by the acid much more rapidly; a tooth which may have only an opening through the enamel large enough to admit the point of a pin, may have a very large cavity of decay in the dentine. The germs crowd into a cavity of this kind, and the food being constantly supplied to them, they grow luxuriantly.

Sweet and starchy materials form the best soil for the growth of bacteria. Their first action upon the food is to transform the starchy portions, such as bread and potatoes, into sugar; next the sugar is changed into an acid. It may thus be readily understood why sweet things generally are so destructive to the teeth, as the acid which causes the decay is formed very quickly direct from the sugar.

Lack of mastication is a cause of decay, as will be shown further on.

Biscuits, bread and butter, candies, etc., eaten by children at bedtime, without cleansing of the teeth afterward, are responsible for the destruction of millions of teeth.

What Are Micro-Organisms?

Micro-organisms, or bacteria as they are sometimes called, are not small animals, but are really species of the lowest forms of plants and require a soil in which to grow.

It is the function of the higher forms of plant life to build great structures, such as the forests, fruits, flowers, etc., and to the lower forms the arduous task of destroying them. These micro-organisms are everywhere to be found. Some species purify, to a certain extent, the water we drink, by destroying the organic substances in it.

The lower forms of plant life do not build largely as do the higher forms, yet they multiply greatly and change chemically—decompose—great quantities of matter that are built up by life, as exhibited in the animal and vegetable kingdoms, and return the materials again whence they came, generally speaking, to earth, air and water.

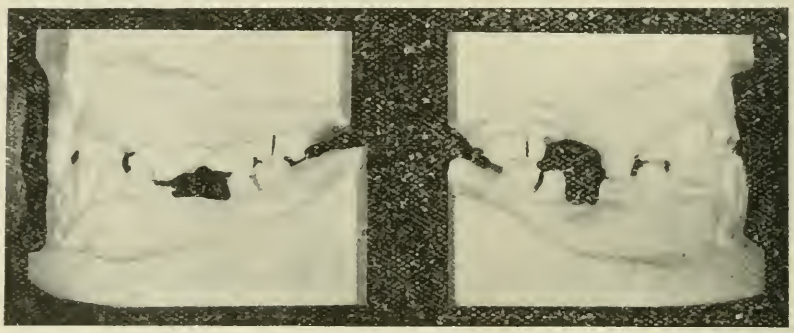
There are many gradations between the highest and lowest forms of plant life, and it is difficult to draw a dividing line between them.

Micro-organisms grow in organic matter. There are two distinct classes, those which generally grow only in dead organic matter, and those which grow ordinarily in living organic matter, such as in animals or plants. There is another division also, those that cause disease and those that commonly do not.

Each germ disease is caused by the growth of a particular form of micro-organism. Certain species will grow in man and some animals, and not in others. Cattle, for instance, may contract smallpox, but no other animal will, so far as known. None of the animals have typhoid fever, measles, and many other diseases so fatal to man, nor do any of the animals have destruction of the teeth by caries. Many of them have tuberculosis. If a person is exposed to a certain disease, and does not contract it, he is said to be immune, that is, there is something in his system which seems to protect him from this certain disease. The hog is immune to snake poison, the bite of a rattlesnake being of no consequence to that supposedly stubborn animal.

If a person survives an attack of what is known as a self-limiting disease, such as smallpox, typhoid fever, measles, yellow

fever, etc., he usually becomes immune to that particular disease. Children who survive diphtheria are immune for a time, but with this, as well as a few other diseases, immunity is not permanent. There are a few exceptions to this rule in some of the self-limiting diseases. This condition of immunity is brought about by the development in the blood, apparently by reason of contact with the particular virus, of an antidote to the poison which has produced the disease. If a person who is physically strong contracts any of these diseases, the antitoxin is developed very rapidly in the blood, the germs are thus prevented from growing, the patient recovers, and that antidote developed in the blood seems to remain usually throughout the life of the individual. If a person is already in



Figs. 14 and 15 show a case in which the temporary teeth in the lower jaw were lost too soon and allowed the first molars to tip forward. The dark lines indicate where the teeth should be.

delicate health, the system has not the power to cope with these micro-organisms and death comes more or less quickly as a result of their development.

It is possible, also, to become immune, or nearly so, to decay of the teeth, by continual battle against the germs which cause their destruction.

What Can be Done to Prevent Decay?

The first requisite is that the mouth and teeth must be perfectly clean—the latter shining. *Cleanliness is the best known preventive of dental caries.* The teeth are not always perfectly formed when they erupt, and the development of the crown or exposed portion stops before they appear through the gum. The imperfections in the enamel, when any are present, are usually so small that they would not be noticed, except upon careful examination by a dentist. All defects should be repaired with fillings, and if there is any ir-

regularity of the teeth, this, too, should be corrected if at all possible.

If parents will take their children to competent dentists as soon as the temporary teeth have erupted, and see that every tooth is in perfect condition, then the little ones will have a fair start, and cleanliness will be the main factor thereafter in the preservation of the teeth. Of course it is desirable to have the teeth examined from time to time, in order that any new cavities forming may be repaired early, and to see also that the permanent teeth as they come along are erupting in their normal positions and are free from imperfections.

It is unwise to allow the first, or temporary teeth, to go to destruction without any effort at repair. The too early loss of these teeth is responsible for many irregularities. In order to get the very best results, the temporary teeth should be kept in perfect condition until their successors shove them out.

The most important teeth of the whole set are the first permanent molars, and these are often decayed beyond repair in the mouths of some children before a dentist is consulted. These molars erupt about the sixth year, immediately behind the temporary teeth, both upper and lower, being the sixth tooth from the median line of the mouth. Mothers very often mistake these for temporary teeth, and do not value them on that account, but if they realized how important it is to preserve the temporary teeth, as well as the permanent ones, there would be a great improvement in the masticatory apparatus of the rising generation, both in utility and appearance.

Teeth which are irregular are much more liable to decay than those that are normally placed, because the irregularity facilitates the lodgment of food, and it is difficult to cleanse them with the brush. Other very serious diseases of the teeth and surrounding tissues, such as pyorrhea, are often due to irregularities.

The teeth in some mouths seem to be more soft than in others and decay more rapidly, so much so that many people think their teeth are so "soft" that it is useless to try to save them from destruction. It is not the "hardness" or "softness" of teeth which governs their decay, but their environment. The saliva varies greatly in different mouths, and it is this variation, more than anything else, which has to do with the apparent resistance of some teeth to decay, rather than any quality of the teeth themselves.

In mouths where the saliva is very tenacious and stringy, decay usually goes on very rapidly, because the teeth become coated over with a viscid film, making a suitable abode for the germs which

cause decay. Good vigorous use of the tooth brush several times a day, accompanied by thorough mastication of the food, will in time change this condition of the saliva to that of a clear, healthy consistency. This "ropy" saliva is very often the accompaniment of a nervous disposition, and the teeth are usually very sensitive. When

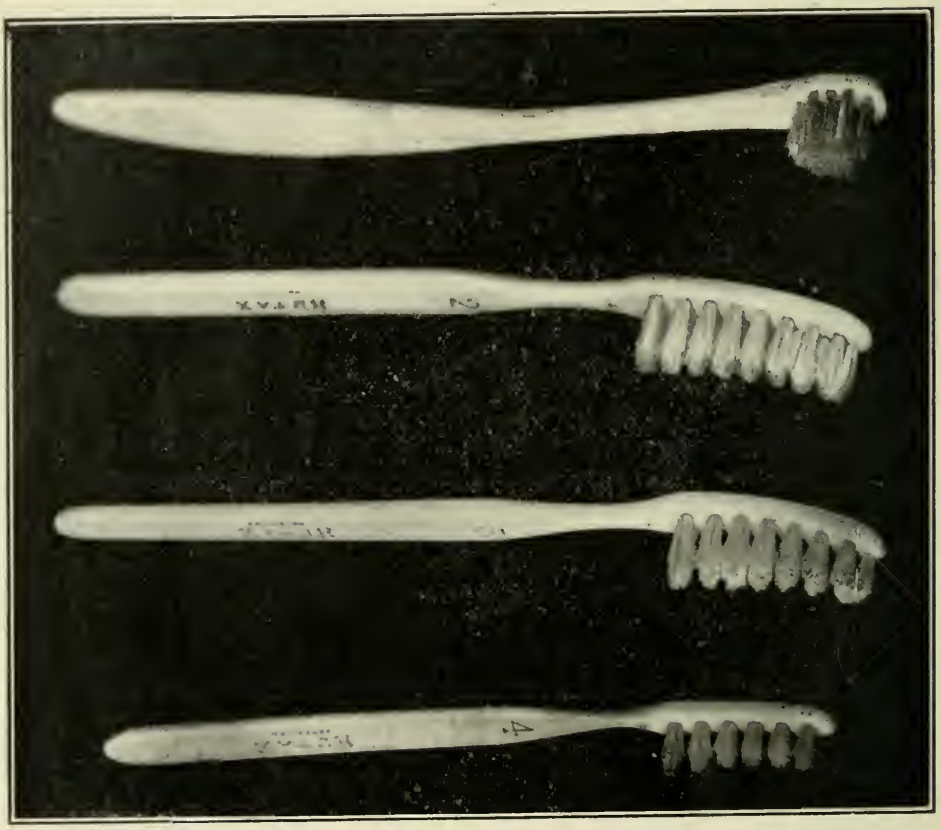


Fig. 16.

1 Is for children and those wearing orthodontia appliances and bridges.
2 Is the best sized for all purposes.
3 Is the three rowed brush, the largest sized brush that should ever be used.
4 Is for brushing the lingual surfaces of the lower teeth.

the saliva is gotten into a healthy state, the extreme sensitiveness of the teeth will disappear. When a person is in a delicate state of health, too, the saliva is not normal, and decay of the teeth goes on more rapidly. There are very many conditions which change the character of the secretions. To prevent the teeth from decaying,

one must keep up the tone of the general health, in addition to the proper use of the tooth brush; the poorer the health, the more carefully should the mouth and teeth be cleansed.

Mastication plays an important part in the preservation of the teeth. Any race of people who live upon a class of food that requires a great deal of mastication before it can be swallowed, invariably have little or no decay of the teeth, because during the vigorous chewing of the food the teeth are brushed and the gums massaged very decidedly. Watch a horse chew his food; his teeth do not decay, and rarely give any trouble, except when worn down by hard mastication or broken off by accident of some kind. The hay and oats are hard substances, and during the thorough mastication which they receive in order to be swallowed the teeth are beautifully polished. The oats contain a great deal of starch, the very substance upon which the germs of decay thrive best, and yet decay does not occur.

It is believed that our forefathers had better teeth than we, and this is accounted for chiefly by the fact that their diet consisted of plain materials that required vigorous chewing before they could be swallowed. They had not, as we have to-day, so many forms of sweet, mushy food; they did not, perhaps, bother very much with tooth brushes, either, but their food did the work which we must do now with our brush. It is well to have for each meal at least one article of diet which requires thorough mastication, and for a final dessert nothing better can be eaten than a good apple, as it massages the gums and clears away to a certain extent any food which has lodged in the interspaces between the teeth.

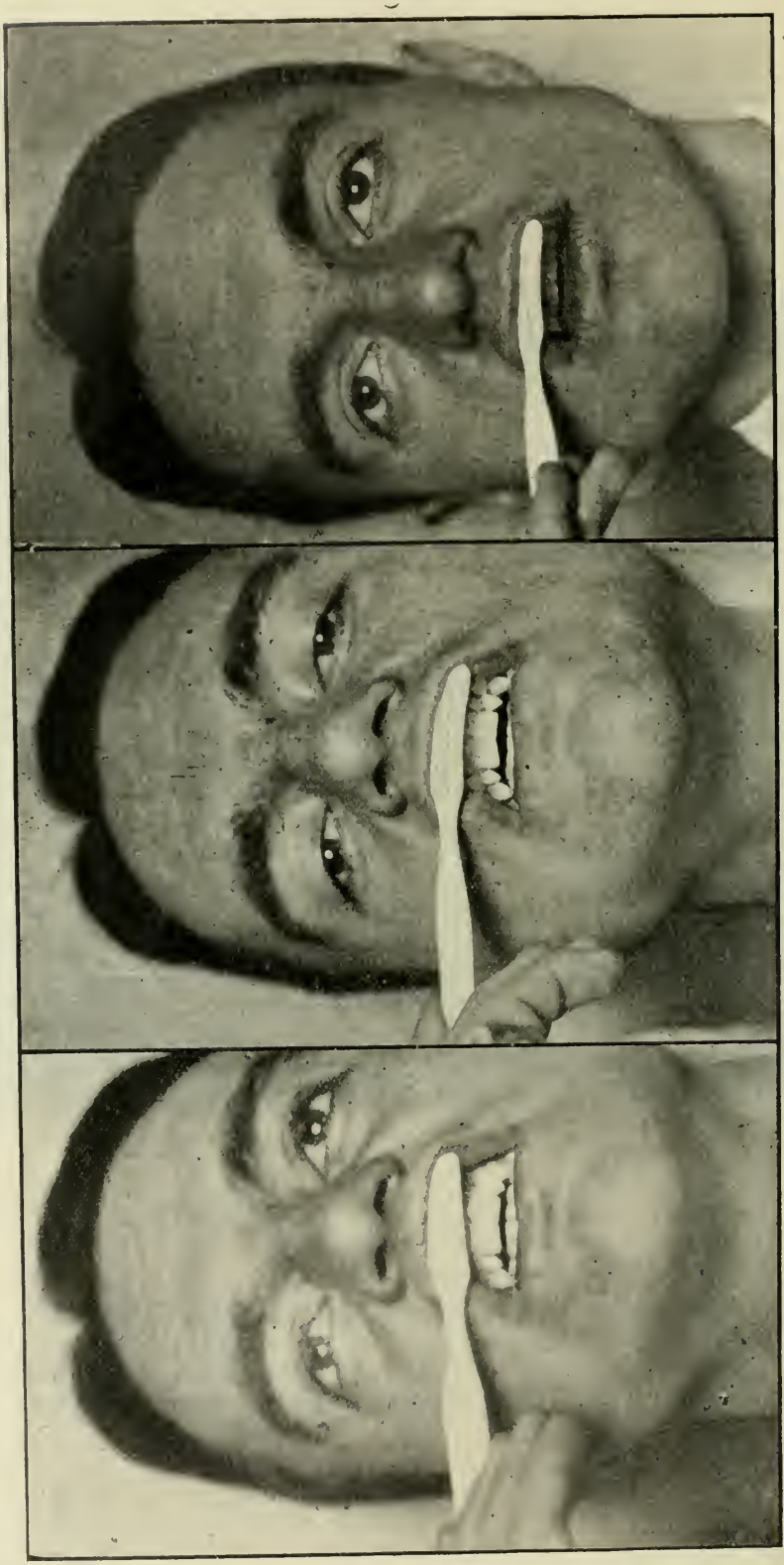
It is unwise to use liquids with which to "wash" the food down into the stomach. If one desires to drink during meals, he should do so when the mouth is empty.

Children should be given plenty of food that requires thorough mastication before it can be swallowed; instead of mincing it up for them, *let them do the mincing with their teeth.* It has been suggested that "if children could be sent to a chewing school, as they are now sent to a kindergarten, there would be a marked improvement in the race."

The teeth, and also the soft tissues surrounding them, require plenty of exercise, in order to develop them to their most perfect condition, just as do all other parts of the body.

How to Cleanse the Mouth and Teeth.

The best known means of cleansing the mouth and teeth, other than by mastication, is by the intelligent use of a good tooth brush,



Beginning of stroke. Progress of stroke. Finish of stroke.

Fig. 17.

Beginning of stroke. Progress of stroke. Finish of stroke.

Fig. 18.

Beginning of stroke. Progress of stroke. Finish of stroke.

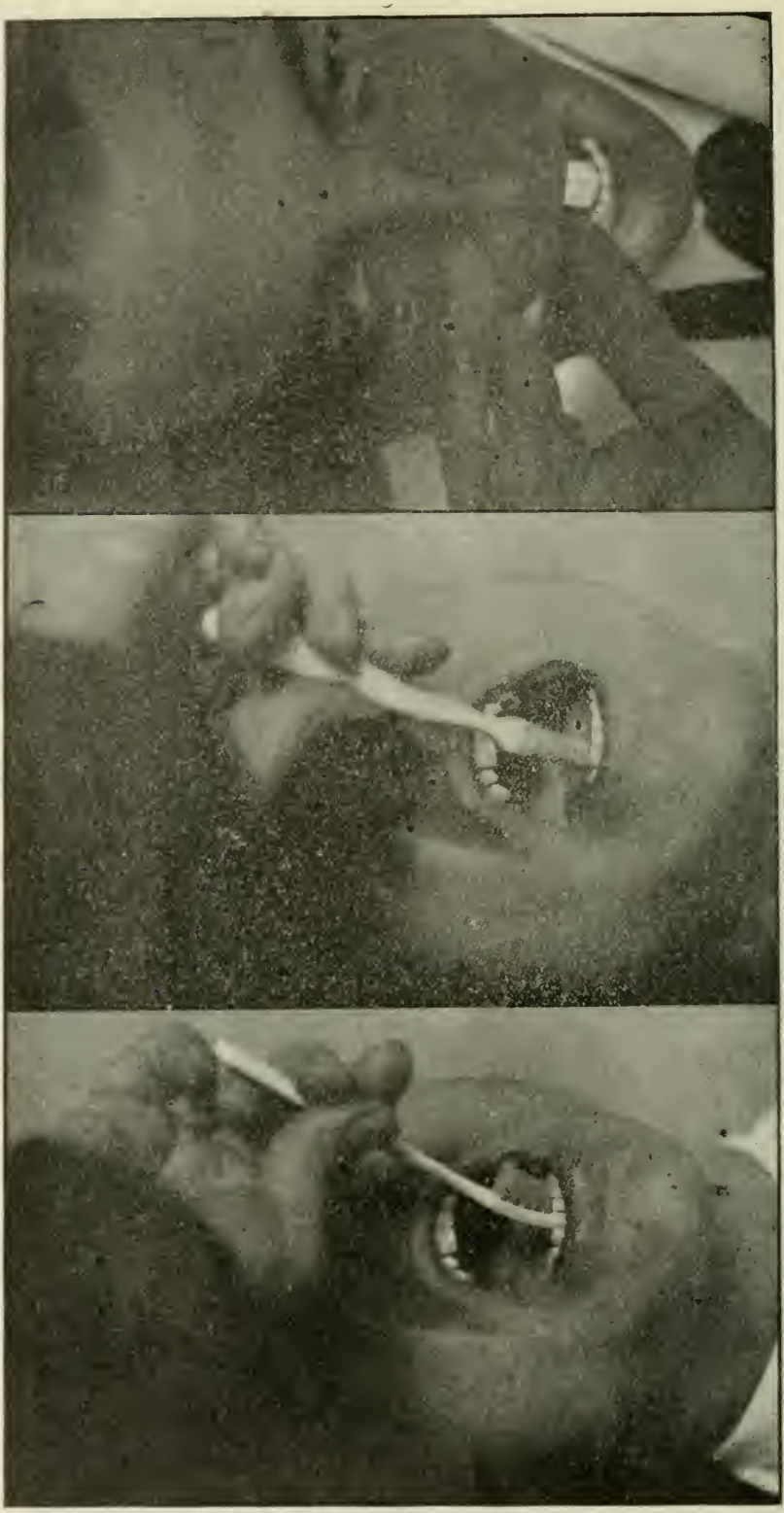
Fig. 19.

Finish of stroke.

Progress of stroke.

Fig. 20.

Beginning of stroke.



Use of Lingual Brush.

Progress of stroke.
Fig. 21.

Beginning of stroke.

Fig. 22.—Circular movement in brushing, the bristles following the arch of the gums as indicated by the dotted lines.

Fig. 23. Fig. 24.

together with plenty of moderately cold pure water. Most brushes which are offered for sale are too large, but it is possible now to obtain brushes which are nearly ideal. One should use a brush of such a size that it may be readily passed between the cheek and the most posterior tooth. In the permanent set this is the wisdom tooth, which rarely receives proper care, because a large brush will not reach it handily, and thus it often decays early, and is looked upon by many as a tooth of poorer quality than the rest, which is not necessarily the case.

The head of an ideal tooth brush for an adult—that is the portion which carries the bristles—should not be longer than one and a half inches or wider than one-third of an inch. The bristles should be arranged in two rows, each of about seven good-sized *tufts of equal length*, and one tuft additional to round off the end. The tufts of each row should be directly opposite each other and the

bristles of unequal length, the centre bristles in each tuft transversely being slightly longer than the rest, giving a serrated face to the brush. The bristles should be no longer than half an inch, and of medium stiffness for the average adult. Where the gums are inflamed, softer bristles are indicated for a time, until the tissues become normal and healthy.

Young children, or those wearing orthodontia appliances, should use a brush with but one row of six or seven tufts, the bristles being shorter than those in the adult's brush.

For those persons who may prefer a slightly larger brush than the one described as the ideal for adults, one of three rows of about eight or nine tufts would be the extreme size to do the work properly.

The head as well as the handle of the brush should be slightly curved, the head a little more than the handle, with the concavity on the side containing the bristles. This curve in the head should

Fig. 25.

be just sufficient that the ends of the bristles will nicely fit against the front teeth. The handle should be somewhat flat so that it can be held comfortably without slipping in the hand, and be easily controlled. All edges of the head and handle should be rounded and the bristles set within one sixteenth of an inch of the end and sides of the head. The whole brush—head and handle—should not be longer than five to six inches, and should not have a long tuft at the end.

There is a right and a wrong way to use a tooth brush, and most people employ the latter method. The old see-saw manner of using the brush is a very poor one, as only the high spots are brushed. The motion should be a *vertical* one, placing the brush high (or low, if for the lower teeth) upon the gums and then

rotating it so that the bristles pass over both the gums and teeth. A very short, horizontal motion will drive the bristles between the teeth, dislodge the food and prevent the formation of tartar. To cleanse the lingual, or inner surfaces, the brush should be used in a similar manner; for the upper, place the ends of the bristles in the centre of the roof of the mouth, and roll it down over the gums and teeth; for the lower, raise the tongue and place the brush low down upon the gums, then roll it up over the ends of the teeth; the bristles upon the end of the brush only may be used in some parts. These movements must be repeated several times, using plenty of water. The grinding surfaces are cleansed by the horizontal use of the brush, as is usually practised for all surfaces of the teeth.

This method will seem awkward at first, but with a little practice it will become just as natural and easy as the old way of brushing across the teeth, with the added advantage that by using the brush in this manner the bristles pass in between the teeth to a certain extent, and cleanse more or less the approximal surfaces. By the horizontal motion of the brush across the teeth the gum tissue overlying prominent teeth, such as the cuspids, will in time recede, exposing the necks of the teeth above the enamel. These exposed surfaces of the roots soon become discolored and sensitive.

It may be necessary occasionally to use a good tooth powder or a little camphorated chalk to remove stains, but any preparation used should be one which does not contain ingredients that are injurious to the teeth, and whatever is used should be carefully washed from around the teeth.

Rinsing the mouth thoroughly is an excellent means of dislodging any collection between the teeth. It is possible by the action of the tongue and cheeks to force a liquid back and forth between the teeth with considerable pressure. Try it. Many persons do not know how to properly rinse their mouth. A very palatable and refreshing wash for rinsing the mouth may be made by adding about ten drops of oil of peppermint to three ounces of water, using a few drops of this solution in sufficient water to rinse the mouth two or three times.

No preparation could be used in the mouth that will kill the germs; they must be brushed away.

Tooth soaps are very injurious and should not be used. Pastes, as a rule, are not as good as powders, because most of them contain sugar, simple syrup, etc., substances which are favorable to the development of bacteria. The advice of a dentist should be sought in reference to the selection of any preparation with which to cleanse the teeth, as many of the articles upon the market for this

purpose are very injurious. Some persons use powdered charcoal, pumice or cigar ashes. One might use something of this kind once in several weeks, if the teeth become stained, but if the brush is diligently used two or three times a day at least, with the addition of a good tooth powder once perhaps every three or four days, there will not be much occasion to use a gritty substance.

It is advisable to have the teeth thoroughly scaled and polished by a dentist two or three times a year, because the approximal surfaces cannot be thoroughly cleansed by the brush.

When food lodges between the teeth, it can best be removed by the use of a quill toothpick. Toothpicks of wood are usually too large and rough, and considerable damage may be done to the gum tissue by their use. Where food lodges there is something wrong, and a dentist should be consulted, as the continual crowding of food into these spaces presses back the soft tissues and exposes the necks of the teeth, and thus decay starts at a point where the germs cannot be brushed away conveniently.

With care, the approximal surfaces of the teeth may be cleansed and polished by means of ordinary rubber bands or floss silk, but the use of these is a dangerous proceeding, because if the silk or rubber band is permitted to snap down upon the gums after it passes the "tight point" between the teeth, it will set up an inflammation in the soft tissues that will cause them to recede. These are all right when used by a careful dentist, but not so in the hands of the average person.

When Should the Teeth be Brushed?

To cleanse the mouth and teeth should be the very first duty in the morning, in order to clear away as thoroughly as possible the germs which may have fastened themselves upon the teeth during the hours of sleep, when the tongue and salivary glands are inactive. It is desirable to get rid of these germs, so that they will not be brushed off by the food in mastication and carried into the stomach along with the breakfast. The teeth should be brushed after each meal to remove all particles of food which may have lodged around them. The most important time of all, so far as the preservation of the teeth is concerned, is after the last meal of the day, taking care to remove thoroughly all particles of food at this cleansing. During the hours of sleep the saliva is not flowing freely, neither is the tongue brushing the surfaces of the teeth; if there is food lodged around them, the germs will have several hours during which to grow undisturbed, and having this grand opportunity, night after night, for years, is it any wonder that they destroy teeth? Persons in delicate health, or those whose teeth are

very susceptible to decay, would do well to cleanse the mouth and teeth before each meal; it will prevent the entrance into the stomach of many germs which more or less interfere with normal digestion.

Hygiene of the Mouth.

1. Good health is necessary to avoid disease.
2. Good health depends on good digestion.
3. Good digestion depends on good mastication and a clean mouth.
4. Good mastication depends upon good teeth.
5. To preserve the teeth from decay and keep the tissues of the mouth healthy it is necessary to keep the teeth and gums free from decaying food particles and to stimulate the circulation of the blood in the gums.
6. To assist in this masticate hard foods.
7. Soft foods cling to the teeth.
8. Teeth decay chiefly at night.
9. Brush the teeth before retiring and upon rising, and if possible after each meal. Rinse the mouth with an abundance of tepid water.
10. Use a tooth brush or brushes of such forms and sizes as will reach all the surfaces of all the teeth.
11. Brush the teeth from the gums towards the biting edges.
12. Use mouth preparations upon the advice of a dentist.
13. Consult a dentist as often as advised by him.
14. Good teeth and a clean mouth are more essential to the child than to the adult.

Reviews

Diseases of Women. By J. Bland-Sutton and Arthur E. Giles. New York: Rebman & Company.

The sixth edition of this admirable work is written in a manner which makes it most valuable to the student of gynecology. The style is easy and conversational; the subject matter is systematically arranged, and a large amount of information is contained within the covers of a comparatively small book.

The importance of the pathology of the different conditions described is impressed on the student, and separate chapters are devoted to the description of fibrosis uteri and adenomyomatous disease of the uterus in their relation to uterine hemorrhage.

A note of warning is also sounded in the chapter on injuries to the uterus, and the necessity for care in the performance of minor operations on the uterus is emphasized.

Operations and operative procedure are left to the end of the book, where all the gynecological operations are minutely described. One misses the illustrations so commonly found in most text books, but the clearness and conciseness of detail more than compensates for their absence.

Altogether the work is one which should commend itself to both student and practitioner. W. B. H.

The Practice of Surgery. By James S. Mumford, M.D., Visiting Surgeon to Massachusetts General Hospital and Instructor of Surgery at Harvard Medical School. Philadelphia and London: W. B. Saunders Co. Canadian agents, J. F. Hartz Company, Toronto.

The author states in the preface that he has endeavored to make this a practical clinical surgery, and for economy of space omits the Principles of Surgery. He consequently deals with the more common things met with in hospital practice. Some things he touches lightly, because they are the realm of the specialist in some branch.

The order of arrangement is unusual. The book starts out with appendicitis, intestinal obstruction and surgery of the abdomen. His reason for such an arrangement being that he wishes to put things in order of importance and frequency.

Diseases of the female organs of generation is an important chapter and is well handled. It is unusual to have these diseases dealt with in a book of Practice on Surgery, and I quite compliment the author on his stand in including these diseases as a part of general surgery.

The book is profusely illustrated, and altogether is a work well worth having at hand. It is almost entirely clinical and operative, and tells in a clear and precise way how things are done at the Massachusetts General Hospital. One can without hesitation recommend it to the general practitioner. W. W. J.

Text-Book of Nervous Diseases for Physicians and Students. By Professor H. Oppenheim, of Berlin. Authorized Translation from the Fifth Edition by Dr. Alexander Bruce, Edinburgh. Two volumes. Pp. 1,424. Price, £2 2s. Published by Schultze, 20 South Frederick St., Edinburgh.

It is generally recognized that Oppenheim's text-book is without question the best of the smaller neurological monographs—that is, written throughout by one author—in any language, and the medical profession must be especially grateful to Dr. Bruce for rendering it accessible to English readers. A small translation of the third German edition was published some years ago by Mayer, but since then the original book has been not only enlarged and brought up to date, but also enriched by a carefully selected bibliography.

This is not the place to give a detailed or technical criticism of the book; it is sufficient to say that it is indispensable to anyone wishing for a really first-rate neurological text-book, for there is no other that can be mentioned as being in the same class. The chief blemish is the unfortunate mistake of including sections on the irrelevant subject of the psycho-neuroses, a subject on which the author is, in the opinion of the reviewer, not at home. The translation is throughout of the highest quality, both in accuracy and in style; the volumes are excellently printed, though they are decidedly too heavy for convenient handling. On the whole, the reviewer knows of no book on neurology that has ever appeared in English which can so cordially be recommended to both the general practitioner and the expert. E. J.

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COMMENT FROM MONTH TO MONTH.

Dean Clarke, of the Medical Department of the University of Toronto, proposes an exceedingly radical step as regards medical standards, examinations and licences in the Province of Ontario. He advocates in the Report of the Board of Governors of the Provincial University to the Government of the Province a revision of the Ontario Medical Act, which will take from the Ontario Medical Council the right to prescribe standards of medical education, to set examinations, appoint examiners and issue authority to licentiates to practice in the province. The chief reason given for this move on the part of the Medical Department of the University, is that the Medical Council is antagonistic and blocks the progress of medical work in that institution.

Whilst we would willingly advocate any movement in this direction which would lessen the examination burdens of the medical student, the subject is of far too great importance to immediately stamp with approval without giving thereto close study, much thought and material consideration. There are other university interests to take cognizance of and as well the interests of the profession throughout the province.

This journal has oftentimes before urged the necessity of a

revision of the Ontario Medical Act, more especially as to representation, believing that in the present day and generation it was not just to the profession at large. Since its enactment institutions have become defunct, conditions archaic, cults moribund.

But it must be well remembered in any attempt to correct or remedy—to make better the Ontario Medical Act, even if in the direction advocated by Dean Clarke, the public are strongly averse to anything of the nature of close corporations; and if fully one-half of the powers of the Medical Council be curtailed, which is the better half probably in the eyes of the public, and there is left to it only the disciplinary powers, the public will very naturally consider that the medical profession would be more of a close corporation than ever.

The public quite naturally seeks a cure of its ills by any means regular or irregular; and the profession of medicine has, upon many occasions, had evidence of this from even the more enlightened and intelligent of the community.

Take away from the profession all its powers over medical education and medical examinations and licences and the public will soon put an end to the rest. For it is more upon its disciplinary functions that the Medical Council is attacked than upon its standards of medical education.

A compromise might be easily arranged and prove mutually satisfactory to the advocates of higher and better qualifications on the one hand and the guardians of the rights of the profession on the other. This might well meet with the approval of the educators, the profession and the student body. That is to say, if the standards and subjects of the primary and more scientific examinations were placed in the hands of the university and the final standards and examinations left as they now are, there would be reason for rejoicing on the part of the student body; the educators would have gained one-half their point and the Council would still be in possession of the practical part, which, after all is said and done, is that which most concerns the profession as well as the public.

There is no doubt about it that the standards and examinations in the primary subjects could best be prescribed and conducted by the university professors or their assistants; whilst the final subjects could be as well looked after by those within as by those beyond the pale of university life.

Dr. John N. Elliott Brown is retiring from the Superintendency of the Toronto General Hospital, after a service of five and one-half years. He has proven himself a successful and com-

petent official in more ways than this, and is a medical man who has seen a great deal of executive work. Careful to detail, systematic, earnest in his work, always willing to do the best he could, the Hospital Trust will look far for a man who can qualify to fill the position as ably as Dr. Brown has.

Medical men who occupy official positions scarcely, if ever, command as good compensation for their ability and work as others who do not administer institutions or departments in civic or public service one whit better, but are looked upon as of more worth, because of the fact the public, although growing in intelligence, have not as yet come to a full and enlightened knowledge of the great possibilities of public health and institutional administration.

It is not necessary to cite instances; they are well known. Probably the time will soon come when competent medical officials will be as well paid for their work as those in other departments of public administration.

Is Dominion Registration to be set back again because of the Province of Saskatchewan not yet having a medical school or university? The special committee of the House of Commons has been considering the amendment to the Canada Medical Act of 1902, the only objection, it is understood, coming from Dr. Neely, M.P., one of the members from Saskatchewan. The objection was along the line above mentioned.

Surely the medical men of Saskatchewan or its Medical Council are not going to block this legislation for such a picayune objection.

This Dominion Registration is for the whole of Canada, and now when it was understood every Province had acquiesced in the amendment, surely Saskatchewan, a Province which is the embodiment of progress in public health matters, with broad and liberal ideas, is not going to be the one Province to block or suspend legislation at this time.

Life Insurance Companies and Public Health.—In a paper read before the Association of Life Insurance Presidents, by Dr. Eugene H. Porter, the Health Commissioner of the State of New York, the following ideas were suggested as a working basis of the immediate establishment in each Insurance Company of a Department of Health:

1. The instruction of medical examiners and life insurance agents in sanitation and preventive disease work.

2. The issuance of a carefully arranged series of letters or circulars on health topics to policyholders.

3. The establishment of a health magazine or bulletin.

4. The arranging for a series of public health lectures in various cities and towns with or without the co-operation of State or local health authorities. Some of these lectures to be published.

5. To use all the time, systematically, the tremendous educational power of the press.

6. Conjoint work with State and City Health Departments.

7. Conjoint work with all organizations interested in public health work.

8. The securing of more uniform and better health laws.

9. The establishment of a National Department of Health.

10. To aid in securing adequate appropriations for health work.

11. The free re-examination of all policyholders. This opens a tremendous field of work.

12. A special investigation of the causes of pneumonia, Bright's disease, diabetes, apoplexy and cancer.

13. Making available that great storehouse of experiences now in possession of Life Insurance Companies—a gigantic collection of facts of incalculable value.

14. Educate—Educate—and again Educate.

Fraternal organizations could also well join in this grand army of health.

Dr. Chas. J. Hastings, Medical Health Officer for Toronto, plans to make the Health Department of this city one of the best arranged and best administered on this continent. Dr. Hastings' first step was to secure a competent head for the laboratories, and reforms were immediately put in force, notably in connection with diphtheria swabs, which have commended themselves to the profession and citizens generally.

Having secured an appropriation of $159,000, which is $67,000 more than spent in the previous year, Dr. Hastings now proposes to organize bureaus in the department. There is to be a secretary of health, who will look after all correspondence, publicity and public health legislation; a bureau of vital statistics; a bureau of contagious diseases; a bureau of food inspection; a bureau of sanitation; a bureau of hospital and ambulance service, and a school for sanitary instruction.

This comprehensive reorganization will make Dr. Hastings' Department one of the most important at the City Hall, and its organization gives strong evidence that Dr. Hastings does not mean to rest content with being just Medical Health Officer. It evinces a progressive spirit, which will mark his administration as capable to the very best degree.

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And Ontario Medical Journal

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Original Articles

RECENT OBSERVATIONS ON THE THERAPEUTIC USE OF RADIUM.

By Dr. W. H. B. Aikins, Toronto,

Consulting Physician to Toronto General Hospital, King Edward Sanitarium, etc.

In collaboration with

F. C. Harrison, B.A., M.B., Toronto,

Physician to Hospital for Incurables. Assistant in Pharmacology, University of Toronto.

From the results recently published by Drs. Louis Wickham and Degrais of Paris, and by Dr. Robt. Abbe of New York, it has been abundantly proven that radium has a distinct place in therapeutics, and, moreover, a place which it seems probable will be gradually extended so as to include many conditions which formerly seemed beyond its scope.

It has been the experience of all workers with this agent that on superficial epitheliomata of the skin its action is specific. The histological changes in the cancer cells following the application of the radium rays are peculiar to themselves and quite unlike those following the use of X-rays, leucodescent light and other agents. It is true that some cases can be treated with good results by excision, the use of arsenical pastes or X-ray, but we have had cases which, after all these methods have proved inefficient, have healed readily after short applications of radium.

In the treatment of erectile angiomata and nevi, excellent results have also been obtained. Dr. Wickham has reported several hundred cases of all forms of birthmarks, from port wine stains to vascular and pulsating angiomata, which have been reduced so that

the skin is almost a normal color, and this without destructive cicatrix. In these cases, however, the treatment is often prolonged, as it is necessary to avoid anything approaching a destruction of the skin. The beneficial effect is due to its irritating action, producing obliterative endarteritis and fibroid change.

On true keloidal tissues radium seems to exercise again its selective action and cause the ready disappearance of these disfiguring hypertrophies of scar tissue.

Various other affections of the skin respond to radium treatment after other methods have failed. Thus it has been our own experience as well as that of others that in the treatment of lupus, chronic eczema, psoriasis, sycosis, acne rosacea and acne keloid radium is an invaluable agent.

A case of a tuberculous ulcer on the finger of a confrere which had resisted all treatment may also be mentioned. It healed readily with a few applications of a strong radium placque. Treatment in these conditions of the skin must be very carefully conducted, as we aim to avoid anything approaching a too destructive action.

Dr. Abbe was the first to employ the method of introducing tubes containing the radium salts into the centres of tumors, and this method he has particularly employed with excellent results in cases of sarcomata. Dr. Wickham, of Paris, has also used the same method and with equally good results.

This brings us to what seems to be the great hope from radium treatment. It is the combination of surgery with the use of radium. The surgeon can devise methods by which the apparatus may be brought into contact with deep lying malignant growths particularly those in the various hollow viscera, such as the stomach, bladder, rectum and uterus, as well as the liver and other organs. Cases are reported in which, by such a combination, either an inoperable case has been converted into an operable one, or after the surgeon has removed all he could, radium has been used with good effect on the malignant tissues remaining.

Furthermore, radium has been used after operation for malignant growths, infiltrating the operative area with the rays, so as to kill any cancer cells which may have been missed at the time of operation. Naturally in such cases the question can never be determined as to the necessity or value of the use of radium in any particular case. There might have been no recurrence without its use, but when, as has been reported, recurrence has appeared two or three times, and finally after radium treatment it has not appeared in the same patient, one cannot help but feel that a large share of the eventual good result should be ascribed to the action of the radium rays.

Rodent Ulcers and Epitheliomata.

Of rodent ulcers we have had experience with seventeen. Without exception excellent results have been or are being obtained. In ten a record of previous treatment with pastes, X-rays, or leucodescent light, was admitted, but no permanent curative result had followed. It is hardly necessary to go into the minute details of all these cases. After a short application of the radium placque, the small ulcers have almost invariably crusted over in ten to fourteen days, and when this crust detached itself the skin underneath was healed and smooth and of a pinkish tint, which soon faded to the normal color of the skin. These patients should be seen subsequently, as in cases where a slight thickening of the tissues remains an application of the rays to produce a deeper penetration without an ulcerative effect is desirable, in order to insure a good result.

Where the ulceration is more extensive, longer and more frequent applications are necessary. The treatment in these cases sometimes extends over several months, as it is necessary to feel one's way very cautiously. One such case was as follows:

Miss G., 32, referred by Dr. H. B. Anderson, came under observation Aug. 28, 1910. Since birth she had had an ulcerated area in the right temporal region. It increased gradually as a child, and from the age of ten until the present she had been under treatment of various kinds. It has twice been excised, and pastes, X-rays and leucodescent light have all been tried. It would improve, but that was all. Among those who have seen this case there is a difference of opinion as to the true condition. The early age at which it began would suggest a lupoid character, but the appearance in August suggested rather a rodent type. Dr. Louis Wickham saw the case after some radium therapy had been employed, but would not give a definite diagnosis. He expressed the opinion that it was probably of lupoid character to start with, but had taken on the character of the rodent ulcer.

When first seen there was an area of scar tissue on the right temple the shape of an equilateral triangle of one inch and a half to each side. In this area, $\frac{3}{4}$ of an inch behind the eye, was an ulcer $\frac{3}{8}$ of an inch in diameter punched out with thickened and slightly undermined edges. The floor was covered with pale, unhealthy looking granulations, and there was a sero-purulent discharge. Behind this ulcer, at the lower angle of the area, was another smaller ulcer of similar appearance, and just at the angle of the eye was a small ulcer, the size of a pin's head.

A strong placque, screened, was used several times, and then

the patient went home. She was seen again at the end of September. There had been a good deal of surface reaction, and a crust had formed over all the ulcers. No further treatment was given at this time. At the end of October she reported again. The crust was still present, but was easily removed, and underneath the skin was formed slightly thicker than normal and redder, but with absolutely no ulceration. The parts were radiated again, using heavier screens in order to get a deep action and soften up the tissues.

It is, of course, too early to say whether this result will be permanent, but from other cases reported in the French literature we can see no reason why it should not be.

The early result here points to the condition being one of rodent ulcer rather than lupus, as experience has shown that the latter do not react so readily as the former to the action of the radium rays.

To show the result with the common rodent ulcer, the following cases may be given as examples:

Mrs. L., referred by Dr. W. B. Thistle, presented a rodent ulcer on the left side of the nose of four years' duration, which had resisted all treatment. Within one month after a series of radium applications the ulcer healed, and is still so at the time of writing, seven months after she was first seen.

Mr. M., of New Orleans, referred by Dr. Allen Baines, showed four typical rodent ulcers on the left cheek and one on the skin of the upper lip. They had been present for two years. He was given applications of a placque of 500,000 activity, eight hours to each spot, extending over a period of two weeks. At the end of that time the radium crusts had formed.

Under date of Nov. 29th, the patient writes from New Orleans: "It affords me much pleasure to advise you that all trace of the affection has vanished, not even the smallest trace of a scar can be seen."

Mrs. R., referred by Dr. W. P. Caven, had a small nodule on the left side of the nose. It appeared two years ago and had increased in size until it was three-eighths of an inch in diameter. It was not ulcerated. It had begun to pain a short time before. She had had no treatment of any kind. She was given a short application of a strongly active placque, and on presenting herself six weeks later the nodule had quite disappeared.

Mrs. D., referred by Dr. J. Noble, rodent ulcer of the forehead: crust has formed, but is not yet detached.

Miss F., referred by Dr. Yeo, rodent ulcer at the tip of the nose, causing great disfigurement, which has completely healed, leaving no scar.

Mrs. C., referred by Dr. F. A. Clarkson, small rodent ulcer just below the eye, which quickly responded to treatment.

Mrs. M., referred by Dr. Barber, of Burk's Falls, rodent ulcer of temporal region. Radium was used on two separate occasions, and the ulcer is now quite healed.

Epithelioma of the Lip.—Two cases of superficial epitheliomata of the lip have responded splendidly to treatment. Other epitheliomata have been referred on which prolonged treatment will have to be carried out, and on which we hope to report more fully later. To mention a few:

Mrs. B., referred by Dr. S. M. Hay, for an epithelioma of the buccal mucous membrane, which had recurred after removal. She was seen six weeks after treatment, and there had been no re-appearance; she will, however, have to be kept under observation from time to time.

A case of epithelioma of the lip, with glandular involvement, considered inoperable, referred by Dr. Howitt, Guelph.

Mr. B., referred by Dr. Partridge, of Burk's Falls, with a recurring epithelioma of the buccal mucous membrane.

Mr. A., referred by Dr. N. A. Powell. It is an epithelioma of the lip in which extensive dissection had been done. There was constant pain and two masses which had recently begun to increase in size. Since beginning treatment the pain has ceased, but it is too early to report further as yet.

Fungating Epitheliomata.—Fungating cutaneous epitheliomata are particularly suited for radium action, and various techniques can be adopted depending on the individual case under observation. "Cross-fire" action often gives excellent results with the use of different forms of filters. A preliminary curettage and removal of the vegetations is of help in decreasing the time required for cure, but is not absolutely necessary.

T. F. T., æt. 54, referred by Dr. Bowman, of Penetanguishene, Ont., presented on Oct. 29th a fungating mass, as large as a fifty cent piece, below and behind the left ear. There had been a small ulcer for about five years, but latterly the growth had been very rapid. The growth was covered with cauliflower excrescences, and projected ¾ of an inch above the surrounding skin. The edges were hard and everted, and the tissues about were quite hard, as though the growth extended to some depth. There were no enlarged glands to be felt. Under local anesthetic the vegetations were removed, and the next day radium applications were made. These were repeated for four days, and then the patient returned home. He was seen again in three weeks, at which time all that was observed

was a small, healthy ulcer, one-half inch in diameter. The epithelium was growing over it, and it looked as though it should be healed completely in another two weeks. The edges were quite soft, as were all the surrounding tissues. A few more applications were made to stimulate the healing, and he again returned home. On December 15th he reported it "practically healed, with only a small crust to be detached."

Melanotic Carcinoma.—Mrs. C., referred by Dr. Chapman, of Kenora, melanotic carcinoma of the left cheek; there has been marked improvement, but the case is still under observation.

Mrs. W., referred by Dr. H. J. Hamilton, melanotic carcinoma of the cheek, as large as a small marble. After three series of treatments it has quite disappeared.

Sarcomata.

The case described below, together with one other case of cancer of the uterus, forms perhaps the most interesting study we have made.

R. J. B., æt. 53, farmer, referred by Dr. Wardlaw, of Galt, Ont. In February, 1909, he noticed a lump at the angle of the jaw, on the right side. X-rays were used without any apparent effect as the mass kept increasing. In April, 1910, the tumor was removed and showed a small round-celled sarcoma. In June it recurred. Excision was again advised, but as a facial paresis had followed the first operation, the patient would not consider further operative procedures. He was therefore referred for radium treatment.

At first, very thorough radiation was carried out with placques, and some decrease in the size of the mass could be noticed. The cross-fire method was here used, a placque being placed on each side of the tumor.

The beginning of October the mass was two inches in diameter and elevated $\frac{3}{4}$ of an inch above the level of the surrounding skin. It was quite firm and seemed attached to the underlying angle of the jaw. On Oct. 5th, an incision was made into the tumor, and a small silver tube containing 1 centigram of pure bromide of radium, with an activity of 2,000,000 was inserted deeply into its centre. It was left in place 24 hours, and the result was most remarkable. At the end of this time there was a cavity present, into which the finger could be inserted, the growth felt much softer and was more freely moveable. From the opening thus made broken down necrotic tissue was discharged, and the size of the tumor visibly diminished. Twelve days after this first treatment the tube was inserted again, two hours daily for six days, with the placque applied externally to produce the cross-fire action.

The patient then returned home and reported in one month. On inspection no tumor mass could be seen at all. On palpation two small masses, which felt like scar tissue, were present, one just in front of the ear, the other behind the angle of the jaw.

We regard this as a most gratifying result, although the patient can in no sense be regarded as cured, and will be required to be watched from time to time. He would be a foolish man indeed who would make any such claim so soon as this, but others report cases of round-celled sarcoma, removed and free from recurrence after five years, and we see no reason why the same result should not be looked for here.

Cancer of the Uterus.

In many cases of cancer of the uterus radium can be of great service. Dr. Wickham has reported cases regarded as inoperable, which were so reduced as to render a later operation possible, while where there had been recurrence in the scar tissues in the vault of the vagina following operation radium was effectual in removing it. In all cases the most striking effect was the rapidity with which the discharge and pain ceased after a very few applications.

The condition is one that offers itself very readily for treatment, on account of the facility with which the apparatus can be applied. Radium tubes can be introduced into the body of the uterus, or radium plaeques can be applied to the cervix. We have ourselves had the opportunity of verifying these beneficial results in the following cases:

A patient, æt. 53, referred by Dr. Tuttle, of Tweed, Ont., first noticed a bloody uterine discharge in January, 1910. She did not consult a physician until June. The cervix was cauterized, but serious hemorrhage recurred, and in July she underwent an operation at the hands of a leading gynecologist in Toronto, when the uterus was curetted, and the cervix amputated. This was all that was done, as, in the surgeon's opinion, the left ureter and bladder were involved, and hysterectomy would not be justified. A very grave prognosis was given.

On August 5th she consulted regarding radium treatment. The discharge, pain, and irritability of the bladder had continued. Dr. F. A. Cleland, Assistant Gynecologist of St. Michael's Hospital, Toronto, was called in consultation, as it was felt that the treatment should be surgical, if possible.

The condition at that date, as reported by Dr. Cleland, was as follows:

"On August 15th, in the vault of the vagina, and where the cervix had been removed, was a raw, bleeding, granular surface,

about two inches in diameter, extending into the vaginal wall. The left side was more involved than the right, and in order to remove the growth completely, an extensive dissection would have been required, and probably the removal of the left ureter.

"The uterus was fixed on the left side, and examination by bi-manual method caused a good deal of pain. The body of the uterus was not enlarged.

"In view of the extensive operation which would have been necessary, and the uncertainty of complete removal, radium treatment was advised."

Treatment was accordingly instituted, and from August 15th to October 7th, with two weeks' intermission, a strong radium placque was placed against the cervix for twelve hours every night. The discharge ceased after the first few applications. The pain disappeared, and the bladder condition improved. On October 7th, a tube containing one centigram of pure bromide of radium in a catheter was inserted into the uterus for fifteen hours. The patient then returned home. Examinations made from time to time had shown a continuous improvement and lessening of the area of ulceration. On November 30th, she reported, and Dr. Cleland again examined her and reported as follows:

"On Nov. 30th, the raw surface was reduced to an area about half an inch in diameter, which showed no tendency to bleed as formerly. The uterus was more moveable, but still somewhat fixed on the left side. The patient reported herself as suffering no pain nor discomfort of any kind, and as having gained about 15 pounds in weight. The improvement in the local condition was almost marked, and an operation could now be undertaken with more certainty of success. But, owing to the improvement under the radium treatment, it seems advisable to continue it for some time yet."

Exophthalmic Goitre.

Dr. Abbe was the first to employ radium in the treatment of this condition. This was effected by making incisions into the thyroid gland, into which radium tubes were inserted. A great decrease in the size of the gland followed, with amelioration of the nervous symptoms, and this result has continued. Dr. Wickham, of Paris, has also successfully treated cases by the placques, with "cross-fire."

A case which presented itself recently has given us an opportunity to observe the action of radium in this condition.

Mrs. M., æt. 31, noticed a small lump at the root of the neck five years ago. Local applications were used, but there was no change one way or the other. One month ago it began to grow, particularly

on the right side. The tumor protruded and began to cause distress in breathing, speaking and swallowing. At the same time she began to feel tired, with loss of energy and appetite. Examination showed enlargement of the isthmus and right lobes of the thyroid, the tumor being quite hard in consistency. The circumference of the neck was 15 inches. The pulse rate was slightly increased.

Applications of radium placques have been made, and already within three weeks there has been marked improvement. The tumor has decreased, so that the circumference of the neck is only 13 inches, and the pressure symptoms have quite disappeared. The improvement in this short period of treatment has been so marked that a further decrease in the size of the thyroid can confidently be expected.

Post-Operative Prophylaxis.

Dr. Wickham, in his latest papers, insists strongly on the association of radium with surgery. He claims that in many cases the radium rays will turn an inoperable case into an operable one, and further, that after operation for malignancy, when, no matter how extensive the dissection, one can never be sure of having removed all the cancerous tissues, radium should be used over the scar, and area of operation, as a prophylactic measure to destroy any stray neoplastic cells.

In three cases we have so applied the treatment, two being sarcomas and one a carcinoma. In the latter case, which affected the breast, the radical operation was performed, and some enlarged glands were present in the axilla, which on microscopical examination were shown to be simply inflammatory. Dr. Adam H. Wright referred her for radium applications over the line of suture, ten days after operation. This treatment was repeated in one month. Whether the treatment has had any effect, we will probably never be able to tell, either one way or the other, as of course surgical treatment alone is very often effectual in these cases.

The other two cases were sarcomata. One was in a male infant, in which a round-celled sarcoma had developed at the side of the anus. It was removed by Dr. Wallace Scott, of Toronto, but reappeared in two weeks. Dr. Scott operated again, and before the sutures were out, referred him for radium treatment.

Very thorough radiation was carried out and has been repeated at intervals since, with the result that there has been no recurrence during four months, although all who saw the case regarded it as one in which recurrence would probably occur, and gave a very grave prognosis.

The other occurred in a man of 61, who was referred by Dr.

Kidd, of Ottawa, on the suggestion of Dr. Wickham, of Paris. He had had a spindle-celled sarcoma of the tissues on the right side of the neck, which had been removed first in Ottawa, in May, 1908, and, owing to a recurrence, again in May, 1910. It soon recurred, however, and a very extensive dissection was done in London, England, in August, 1910. Six days after the operation he went to Paris, where radium applications were made by Dr. Wickham for a period extending over three weeks. As a prophylactic measure, he was advised to have this treatment repeated at intervals, and in Toronto in October, 1910, was given another thorough radiation over the field of operation, and particularly at points where the scar tissue was in excess. By this method we believe any sarcoma cells can at least be held in check, if not actually destroyed.

From the experience we have had with this agent during the past few months abundant opportunity has been given to verify the results obtained by others in its therapeutic use.

Judging from results already obtained, we feel that radium therapy is only in its infancy, and that the future will disclose other pathological conditions in which it can be of great service.

134 Bloor St. West.

THE SANITARY SUPERVISION OF PROSTITUTES.*

By Prince A. Morrow, M.D., New York.

To the members of the American Society of Sanitary and Moral Prophylaxis Dr. Morrow said that the provision of the Page Bill before the United States House of Representatives, as regards the sanitary supervision of prostitutes, was of interest to the members of the Society. Through the medium of this legislation it is proposed to study every means, educational, sanitary, moral and administrative which promises to be most effective for this purpose.

The essential intent of this law is sanitary, although to a certain degree corrective and punitive.

That this is a new departure in sanitary science is seen from the fact that the bill recognizes the existence of those diseases of social life which are dangerous to health and of the necessity of instituting measures to suppress them.

Of course this legislation meets with opposition, as it is thought to be the thin end of the wedge to the State regulation of the social evil; and it is almost identical with that of the Continental System of Reglementation, which provides for the arrest of professional prostitutes and their medical examination, as well as their being remanded to hospital if found diseased. The measure does not provide for licensing prostitution, but its administration would carry with it the disgrace of publicity, as with suspected or detected criminals.

It is not to be considered reformatory, as no prostitute was ever reformed by punishment; on the contrary, she would become more calloused and confirmed in her calling. To the debutantes in vice it would be, as the younger the woman the more apt to disease.

Nor is the legislation intended for the diseased women themselves, but rather in the interests of the men whom they would infect, that is, class legislation based upon sex. It is directed against a particular class of women for a particular class of men.

Venereal diseases have this difference from all other infectious diseases, in that they are generally contracted voluntarily. Venereal disease is sought, excluding accidental and innocent infections. Should the State then protect men who are amply able to protect themselves by total abstinence? If it does then it recognizes that sexual debauch is a necessity for men.

It is true that prostitution has always existed and that it will

*Digest of paper published in "Interstate Medical Journal."

exist; there is always an abundant supply of infectious material; and the difficulty would lie in rounding up and isolating them all at one time in hospitals until cured.

If only a portion is isolated that creates a demand, and commercial instincts would readily become active in supplying that demand; and the procurers would reach out for young recruits. The young recruit soon brings an increased amount of infection.

In the administration of this law the police officer supplies the testimony for convicting of prostitution and the medical man supplies the testimony that she is diseased. The physician would thus be the judicial officer in that she is consigned to the hospital through his evidence and discharged as cured by the same.

A difficulty arises in saying just when a patient is cured, for these women seldom practise their avocation when the disease is in its acute stage; the vast majority originate from chronic or latent infections. So with syphilis in the active stages, its diagnosis is nearly always comparatively easy; but in the intervals between outbreaks there may be no evidence of the disease. The Wassermann test is most valuable, but cannot always be relied upon, so we must rely upon the clinical evidence.

Then there is not adequate provision for these patients in hospitals. In New York there is not hospital accommodation for one in five hundred of these patients. The only good in the law Dr. Morrow sees is that it compels authorities to correct this abuse.

Nor must it be lost sight of that the moment hospitals begin to serve as a house of correction there is a stigma which repels other patients.

As to cure, there can be no assignment of time limit; they may be whitewashed for a time, cleared up of existing manifestations, but not altogether cured.

Janet, a high authority in France, states that to attempt to eliminate cases of gonorrhea by medical inspection and treatment in the hospital is like pouring water through a sieve, and yet Janet is an ardent advocate of regulation. He advocates that medical examination and isolation be applied only to syphilitic cases. He says all prostitutes have gonorrhea; and if you lock them up for a torpid state, you must lock them all up.

But why enforce such a law in a haphazard method? Why not enforce it against all, and nearly all are practically diseased? Why not adopt medical inspection as practised in Continental countries, weekly, to promptly weed out all sources of contagion?

This system fails to limit disease because the disease is undetected; hospital detention is insufficient for a cure, and if cured

they are almost immediately re-inoculated. Fournier says it does little good and does not diminish venereal morbidity.

One bad effect is that the public regards every woman as safe who has been discharged from the hospital, or if medical examination fail to establish a diagnosis there is a clean bill of health. This plan has been tried for over a century in Continental countries and has been abolished in many of them.

In the light of our present positive knowledge of the prolonged contagious activity of both these diseases and their contagiousness after apparent cure, the continuation of this policy is absurd.

The reason why this policy has failed is that no cognizance has been taken of the masculine factor in the spread of the diseases; all measures to stamp out the vice have been directed against women, and the male factor is *par excellence* the spreader of the diseases. It is the partner of the prostitute who carries the poison home and distributes it to his wife and children. So he is directly responsible for the vast mass of disease engendered in the family. That he does it through ignorance does not alter the circumstances. The whole situation in a nutshell is that men infect women and do not wish to be infected themselves; they demand sanitary guarantees, but offer none themselves. So no health board can institute a scheme of prophylaxis without taking cognizance of both the male and the female factor in the spread of these diseases.

Nothing can be done so long as we hold to the ethical heresy that one-half of humanity has imperious duties which are not binding on the other half.

As it is not the function of the public hospital to serve as a house of correction, so it is not the intention that Health Boards which are established solely in the interests of the public health should exercise their powers for punitive purposes. If the State is to make any attempt toward the repression of venereal disease, let it be intelligent, comprehensive, impartial, based upon sound scientific principles and sane sanitary methods. Let it not resort to a unilateral measure which has been condemned by its practical results elsewhere and is foredoomed to failure.

In 1901 Dr. Morrow advocated placing venereal diseases on the same plane of sanitary control as other infectious diseases dangerous to the public health, the entering wedge to this control being the obligatory notification of these diseases, under specified conditions, with due regard to their shameful character in popular estimation. They cannot be controlled without the intelligent co-operation of the public, and the public needs to be enlightened with regard to them. Publicity is the first requisite.

Medicine

Graham Chambers, R. J. Dwyer, Goldwin Howland,
Geo. W. Ross, Wm. D. Young.

Myxo-Sarcoma of the Right Frontal Lobe. With Extensive Degeneration in the Cord. By Geo. E. Price, M.D. *American Medicine*. Nov., 1910.

This 42-year-old patient had suffered for three years from headache and localized fits without other signs of growth in the brain. Then rapid blindness occurred, and incontinence was *noted*.

Examination revealed Jacksonian attacks from right motor cortical irritation; pupils normal, paresis of oculomotor and sixth nerves on the right side. Right temporal artery swollen and tortuous.

Left sided hemiparesis of arms, but a double spastic paralysis of both legs. Sensation was not affected. Daily seizures were followed finally by inability to swallow and non-reply to questions.

Pathological examination showed right frontal tumor with degeneration of optic nerves and chiasma.

The degeneration of the cord was similar to that occurring in pernicious anemia and toxemias.

G. W. H.

Spondylitis Typhosa with Report of Three Cases. Andus Frick, M.D., Chicago. *Interstate Medical Journal.*

During the later febrile stages of typhoid fever, in the convalescent period, or even as late as one year after recovery, spondylitis may appear, with a history of injury or exposure or more frequently without any definite predisposing cause.

Pain in the back or abdomen is the initial sign, and this pain is increased by movement or coughing, and may be cervical, dorsal or lumbar in situation.

Fever is practically constant in its appearance and may last for weeks. Nervous symptoms are not common, contrary to general belief, but if present are certainly warranted by the disease.

The local signs are tenderness, rigidity, swelling, redness, kyphosis and scoliosis.

Nerve root signs are usually initiative, and include root pain, rhythmic contractions, paresthesias and cord symptoms.

The prognosis is good, and the duration up to two years or more.

The pathological condition is unstudied, but current views consider it as neurotic or as organic, and when the latter is considered the cause, the actual local disease may be placed in *bone*, *joint* or *meninges*.

Therapy demands immobilization of the spine and heat to relax the muscles surrounding it; while vaccine treatment should assist recovery.

Frick's three cases illustrate the condition well, and an excellent bibliography concludes his article. G. W. H.

Further Remarks Regarding the Motor Function of the Stomach. By H. M. W. Gray, M.B., C.M. Aberd., F.R.C.S. Elgin. *Lancet*, Dec. 3, 1910.

Dr. Gray urges anew the presence of a "middle sphincter," twixt cardia and pylorus, while he contends with the view that the normal pylorus may be located below and to the left of the diaphragm during digestion, and he believes that radiographers have mistaken the middle sphincter for the pylorus.

Gastric ulcer, if situated in the pylorus, is painless at the earlier stages of digestion, a fact confirmatory of this *muscular band*.

G. W. H.

Clinical Significance of Lack of Development of the Pyramidal Tracts in Early Infancy. By B. K. Rachford, M.D.

The pyramidal tract fibres do not become myelinated till the child is three or four months old, and probably do not function before.

It is possible that the freedom of young babies from convulsions depends on this fact, so also the presence of a normal plantar extensor reflex at this age; while finally it may be concluded that the late appearance of spastic palsy in congenital or birth palsies may also be referred to late myelinization of the tracts.

Surgery

Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

The Operative Treatment of Cranial Fractures. By Frank Hartney, M.D., New York. *American Journal of Surgery.*

Realizing that the lucid interval is not the rule in cases of hemorrhage, the writer places first importance upon a rise of blood pressure (130-160) together with changes in rhythm rate and depth of the respirations as showing the presence of pressure. If the temperature remains normal, or at most a degree or two above normal, with the patient, of course, still unconscious, hemorrhage is probably the cause. An increasing hemorrhage is the only indication for immediate operation; otherwise he advocates waiting till shock has passed, and according to the following:

Fissures that are deep (presumably those of the vertex) should be explored with a drill to determine the injury to the vitreous plate (innermost lamina) and to remove foreign matter.

That depressed fractures, simple and compound, be raised and the fragments replaced when perfect hemostasis and asepticity of the wound can be obtained.

If there is much intra-cranial injury the wound, after being cleansed, is tamponed and allowed to heal by granulation, but wherever possible the fragments, preserved in salt solution, are replaced in a thin layer of mosaic between the dura and periosteum. Under such treatment he has 80 per cent. of ultimate cures; ten per cent. show late symptoms, such as headache, vertigo; six per cent. show immediate cures, but later develop severe headaches or epilepsy, while the mortality has been four per cent. When it is impossible to re-implant the bony fragment Hartney prefers closing the gap later with a celluloid plate in preference to what is termed secondary implantation of the fragments.

He has had fifteen cases of celluloid implantation in individuals who, as the result of fracture with bony loss, were suffering from severe headaches, epileptiform seizures, etc., and claims 73 per cent. of cures, with 23 per cent. not heard from, and no deaths. The

length of time elapsed since operation, however, is not given, so that such information is not altogether satisfactory.

In fractures of the bone attention is directed not so much to the bones as to the hemorrhage, with its resulting compression signs, and the avoidance of infection. In 85 per cent. of the cases the hemorrhage is both intra and extra-dural. The author favors operative measures—decompression accompanied by drainage of the subdural space in cases of intra-dural hemorrhage for two reasons: to prevent meningeal adhesions with late traumated neuroses, which ensue, and in unconscious patients to avoid inhalation-pneumonia.

In cases where infection has occurred he uses larger osteoplastic flaps where the bacteria have most probably entered and drainage by gauze. G. E. W.

Abdominal Injuries and Their Treatment By Charles H. Goodrich, M.D., Brooklyn, New York.

Those injuries involving the alimentary tract he divides into:

1. Crushing between the force and some part of the body framework.
2. Bursting of a more or less distended viscera by a blow.
3. Laceration near the point of attachment.
4. Laceration of the attachments themselves.

The small intestine is usually the part injured, being involved in 78 per cent. of cases, while the stomach is affected in 10 per cent., the remaining 12 per cent. occurring in the colon.

The symptoms are variable. As a rule, shock, more or less pronounced, is present. The pulse rate is usually somewhat increased, and may be very rapid. Vomiting is seldom absent. Respiration is usually shallow and the abdominal focus present. In many cases the author thinks it is very difficult to distinguish between shock due to hemorrhage and visceral rupture, and as immediate operation is indicated in such cases the differentiation is not important to the patient. Very little stress is placed upon the obliteration of the hepatic dulness, because distended coils very commonly produce this symptom.

The prognosis depends upon the treatment. By the expectant method the mortality is within a small fraction of 100 per cent. Immediate exploration—within six hours—reduces this to about 30 per cent. Except in the presence of continued hemorrhage, one should wait from half an hour to three hours for the shock to be

in part recovered from. Even should there be no internal injury, no harm will ensue.

Among the interesting features in technique we might refer to the fact that the author believes in washing the abdominal cavity thoroughly with normal saline, and leaving the abdomen partly filled with the same. Intra-venous saline infusions are used before and after operation in cases of marked shock. Drains are introduced whenever viscera have been penetrated or ruptured. Fowler's position and an ice coil to the abdomen as soon as reaction from shock is obtained. Should intestinal paresis supervene, lavage every four hours will accomplish more than enemata.

G. E. W.

Japanese Method of Restoring Life.

Abrams (*N. Y. M. J.*) says that *kuatsu* is an integral part of *jiu jitsu* in restoring those who have been "knocked out." The subject is placed in the prone position, with arms extended sideways. The operator with his wrist lands severely upon the seventh cervical vertebra, with the regularity of a carpenter with a hammer. As soon as the patient regains consciousness he is placed in a sitting posture, his arms are rotated and he is aided in walking. The latter injunction is mandatory, the object being to restore completely the circulation and respiration, otherwise the subject will relapse into unconsciousness. The essential feature of this method is the concussion of the seventh cervical spine by means of which the heart reflex is elicited.

Ulcers.

Roswell Park (*Am. Jour. of Dermatology*) says the so-called poultice of charcoal and brewer's yeast clears sloughing tissue and overcomes bad odor. The charcoal may be left out if there is no special bad odor. The ordinary compressed yeast cake is equally serviceable when brewer's yeast is not readily obtainable. The yeast cake may be mixed with water into a paste of requisite fluidity. Applied to the foulest surfaces, it is a speedy agent for removing dead and dying tissue. On bed-sores it will cause a separation of all necrotic tissue and restore a healthy, granular condition. It is painless and effectual. Dr. Park lauds yeast as of great value in tubercular lesions, whether pulmonary or otherwise, as colitis and rectal ulcerations. If the yeast cake is used one should be taken every 24 hours.

Ophthalmology

D. N. Maclennan, W. H. Lowry.

A Study of the Pathological Histology of Trachoma: the Trachoma Bodies. By Hanford McKee, Montreal. *Ophthalmoscope*, Jan., '11.

The author has observed that, in eleven out of twelve cases of acute trachoma, trachoma bodies were found, and that faulty technique explains their absence in the twelfth case; that in six cases of old trachoma, with scar formation and pannus, the bodies were not present; that in the mucous membrane of an inflamed tonsil, inclusions somewhat similar in position and staining reaction to the trachoma bodies; that in one case of inflamed conjunctiva from the presence of a foreign body in the cornea, inclusions were found, indistinguishable from trachoma bodies, and that in two infants with normal conjunctiva, trachoma bodies were found. He therefore concludes:

1. The trachoma bodies of Halberstaedter and Prowazek are constant in acute trachoma.

2. That the inclusions are protozoa, and the cause of trachoma, we do not believe proved, but as yet we are unable to offer any suggestion as to the nature of these inclusions.

3. The trachoma bodies are not specific for trachoma.

4. They occur in other conjunctival inflammations and in the normal conjunctiva.

5. That the etiology of trachoma is still undiscovered.

W. H. L.

Psychiatry

W. C. Herriman, Ernest Jones.

Psychoses Associated with Acute Infectious Diseases. By A. M. Barrett. *Cleveland Med. Jour.*, Dec., 1910.

The paper is mainly taken up with a condensed account of five cases in which a post-mortem examination was made. From one to two per cent. of cases of insanity are due to acute infectious disease. It is not known whether the pathological findings in the nervous system are due to the hyperthermia or to the direct action of toxins. Enteric fever is the commonest infection concerned. The writer makes the very questionable statement that there are no specific clinical symptoms that distinguish this group of psychoses from non-infectious conditions. The only constant symptom he finds is the disturbance of consciousness. The severity of the mental symptoms varies with the intensity of the infection. E. J.

Pericarditis.

The *Journal of the American Medical Association* says the indications for treatment are: (1) To treat the underlying cause of the inflammation. (2) To relieve pain. (3) To inhibit the progress of the disease and prevent exudate if possible. (4) To quiet the heart. (5) To remove the exudate, medicinally if possible, surgically if the amount is at all large.

Gonorrheal Epididymitis.

Bruck (*Med. Klinik*) incises tunica propria for relief of tension of the inflamed organ. He punctures the scrotal skin with a sharp knife and the tunica vaginalis communis and propria slit for a length of one cm. in the proximal portion of the epididymis. He then paints the wound with tincture of iodine and covers with a plaster. Decided relief is said to be obtained by this procedure.

Reports of Societies

ONTARIO MEDICAL ASSOCIATION

The 30th annual meeting of the Ontario Medical Association will be held in Niagara Falls, Ont., on May 30th, 31st and June 1st. The spacious rooms of the Clifton House have been secured for the meetings, and from the appearance of the provisional programme, which has just come to hand, the attendance this year should surpass all previous records.

The session will open on Tuesday morning, May 30th, with registration of members at the Secretary's desk. At 2 p.m. the President delivers his address, which is followed by a symposium on appendicitis. The pathological aspect is discussed by N. T. McLaurin, Toronto, the medical treatment by R. D. Rudolf, and the surgical by H. A. Bruce, Toronto. Following this is the address in medicine, delivered by a Canadian, T. B. Futcher, now Associate Professor of Medicine in Johns Hopkins, Baltimore.

Evening Session—8 p.m.

1. The Relation of Laboratory Work to Medicine—Norman M. Harris, Prof. of Bacteriology, University of Chicago.

2. Public and Professional Aspects of the Pneumonia Question—William Charles White, Medical Director, Tuberculosis League, Pittsburg, Penn.

9 p.m.—Reception in Clifton Hotel ballroom, tendered to the members of the Association by the President, H. R. Cosgrain.

Wednesday, May 31st, Morning Session:

Surgical Section—9 a.m.

1. A paper—Robert Luey, Guelph.

2. Surgical Diagnosis of Lesions of Kidney and Bladder—J. K. McGregor, Hamilton.

3. Open Method of Treating Fractures—F. N. G. Starr, Toronto.

4. A paper—A. Primrose, Prof. of Clinical Surgery, Toronto.

5. A paper—E. Archibald, Montreal.

6. Thoracic Surgery—E. Von Eberts, Montreal.

7. Some Interesting Cases—H. S. MacKendricks, Galt.

MEDICAL SECTION—9 A.M.

1. Bacteriology of Tuberculosis—A. H. Caulfield, Gravenhurst.

2. A paper—John McRae, Montreal.

3. The Present Status of Radium Therapy—W. H. B. Aikens, Toronto.

4. A paper—L. E. Roundtree, Baltimore.

GYNECOLOGY, OBSTETRICS AND PEDIATRICS SECTION—9 A.M.

1. Post-Partum Hemorrhage—Robert Ferguson, London.

2. Non-Surgical Treatment of Tuberculous Adenitis—Campbell Laidlaw, Ottawa.

3. Use of Cold Baths in Treatment of Diseases of Children—James Newell, Watford, Ont.

Discussion, led by S. McCoy, St. Catharines.

4. Differential Diagnosis of Right-Sided Salpingitis and Appendicitis. When to Operate in Salpingitis. When to Operate in Appendicitis—S. M. Hay, Toronto.

5. Diagnosis of Extra-Uterine Pregnancy—James McLeod, Buffalo.

Discussion, led by Dr. Goldsborough, Buffalo, N.Y.

SECTION OF HYGIENE AND MILITARY SANITATION—9 A.M.

1. Municipal Control of Milk Supply—Charles J. Hastings, M.H.O., Toronto.

2. A paper—John Phillips, Associate Professor of Medicine, Western Reserve University, Cleveland.

3. A paper—J. Heurner Mullin, Hamilton.

4. A paper—Major Lorne Drum, P.A.M.C., General Secretary Canadian Public Health Association.

WEDNESDAY AFTERNOON—GENERAL SESSION—2 P.M.

1. Address—George W. Crile, Cleveland.

2. Surgical Diseases of the Umbilicus—Thomas Cullen, Assistant Professor, Johns Hopkins, Baltimore.

BUSINESS SESSION—4 P.M.

Wednesday Evening—Annual Dinner, Clifton Hotel Banquet Hall.

THURSDAY MORNING, JUNE 1ST—SURGICAL SECTION—9 A.M.

1. A paper—H. R. Elliott, Niagara Falls.

2. Two Cases of Phlegmonous Enteritis—L. W. Cockburn, Hamilton.

3. A paper—C. T. McKeough, Chatham.

4. Fractures—Walter McKeown, Toronto.

5. A paper—Hadley Williams, London.
6. A paper—Ingersoll Olmstead, Hamilton.
7. A paper—James H. McGerry, Niagara Falls.

MEDICAL SECTION—9 A.M.

1. A paper—F. C. Neal, Peterborough.
2. Aortitis—F. Arnold Clarkson, Toronto.
3. Serum Treatment of Pneumonia—James H. Duncan, Chatham.
4. Our Results with "606"—R. P. Campbell, Montreal.

GYNECOLOGICAL SECTION—9 A.M.

1. A paper—A. B. Welford, Woodstock.
2. Infantile Eczema—W. H. Moorehouse, London.
3. A paper—A. T. Shillington, Ottawa.
4. Typhoid in Child Complicated by Thrombosis of Femoral Artery—Henry T. Machell, Toronto.
5. Twisted Pedicle of Ovarian Cyst—E. R. Secord, Brantford.
6. A paper—Charles Carter, Hamilton.
7. Cesarean Section. When to Operate—Frederick Fenton, Toronto.
8. Phlebitis Following Pregnancy—J. L. Hauley, Almonte.

Discussion, opened by Adam Wright and A. T. Shillington.

SECTION EYE, EAR, NOSE AND THROAT—9 A.M.

1. A paper—T. Woodruff, Chicago.
2. A paper—Dr. MacPherson, New York.
3. A paper—D. G. Wishart, Toronto.

THURSDAY AFTERNOON—GENERAL SESSION—2 P.M.

1. Address in Surgery—A. E. Garrow, Assistant Prof. of Surgery, McGill University, Montreal.
2. Symposium of Anterior Poliomyelitis (*a*) Epidemology—Robert Parry, Hamilton.

(*b*) Surgical Treatment—John Parry, Hamilton.

Discussion, led by A. Moir, Dunnville.

F. ARNOLD CLARKSON,
Secretary.

471 College St., Toronto.

Reviews

Psyche. A Concise and Easily Comprehensible Treatise on the Elements of Psychiatry and Psychology. For Students of Medicine and Law. By Dr. Max Talmey. Price, $2.50. New York: The Medico-Legal Publishing Company.

In present day medicine, when psychiatry is standing out so conspicuously, when more attention is given to the teaching and study of the subject than formerly, the average general practitioner will welcome any book which will give a good, practical exposition of the subject. To one in general practice, Dr. Talmey appears to have accomplished this satisfactorily, and a study of it will lead to a practical working knowledge of psychiatry and psychology.

Three Contributions to the Sexual Theory. By Professor Sigmund Freud, Vienna. Authorized Translation by Dr. A. A. Brill, New York. (Pp. 91. Price $2.00. Published in the Journal of Nervous and Mental Diseases, Monograph Series, 64 West Fifty-Sixth St., New York.)

This volume, which should more properly be entitled "Three Contributions to the Theory of Sex," is a translation of the second German edition; the first one was published some six years ago. It appears at an appropriate time, when there is much grave misunderstanding concerning Freud's views on sex, and, as these are set forth in plain and unequivocal language, there should be no further excuse for the continuance of this misunderstanding. One sometimes hears extraordinary statements to the effect that Freud attributes the psycho-neuroses to a lack of opportunity for sexual gratification (by which coitus is usually intended), and so on. The truth is, of course, that Freud attributes them to buried, *mental* conflicts over sexual topics, and holds that the mere extension of such opportunity would in most cases merely aggravate the morbid condition. Like all others who have investigated such problems, he uses the term sexual in a broad sense, to include not only the direct manifestations of the reproductive instinct (maternal and sexual desire), but also the indirect ones (love, auto-erotic activities, etc.).

The present volume deals fully with such matters, with the

origin of sexual aberrations, the sexual life of children, and the transformations that take place at puberty. It is one of Freud's most important productions, and can warmly be recommended to all those who feel the need of clarifying their ideas on these much-neglected aspects of physiology and pathology. Dr. Brill deserves our cordial congratulations and thanks for the successful accomplishment of the difficult task of translation. To the original he has added a useful index. Professor Putnam has written a general introduction, referring especially to the prevalent attitude of the medical profession towards the investigation of such matters, and the fundamental importance they have for our understanding of the psycho-neuroses and our power to deal with them. E. J.

Hints For the General Practitioner in Rhinology and Laryngology. By Dr. Johann Fein, University of Vienna. Translated by J. Bowring Horgan, M.B., B.Ch., Golden Square Hospital, London, England. New York: Rebman Company.

The translator, Dr. Horgan, having worked at Dr. Fein's clinic, has gained at first hand a practical knowledge of his principles, and thus seeks to make them better known to English-speaking surgeons.

The book, whilst primarily not intended as a text-book, will be found adaptable to the requirements of students and those in the practice of general medicine. It has met with considerable success in Germany and Austria.

Vaccine Therapy and the Opsonic Method of Treatment. By R. W. Allen, M.D., B.S. Third edition. London: H. K. Lewis, Gower St.

Dr. Allen has included a vast amount of information in the 277 pages that make up this useful work on a comparatively new subject. He devotes considerable space to the immunilogical problems concerned in the practice of therapeutic inoculation of bacterial vaccines, as laid down by Wright and his associates. These problems are clearly discussed, and their practical bearing upon the subject shown. Details of the laboratory technique necessary for estimation of the opsonic index, etc., and the preparation of bacterial vaccines are given.

When Dr. Allen comes to consider the various disorders due to micro-organisms, he does so from a bacteriological standpoint. For

example, under infections due to the bacillus of tuberculosis are included Tuberculous Cystitis, Tuberculous Adenitis, Pulmonary Tuberculosis, etc. In the case of each micro-organism are given the methods of diagnosis and the manner of treatment by inoculation with bacterial vaccines. Clinical and laboratory methods for controlling dosage and reinoculation are set forth. The only criticism of an unfavorable nature one might reasonably make is that Dr. Allen might possibly have devoted more space to clearer indications for dosage and reinoculation.

Altogether, however, Dr. Allen's work is by far the best yet produced on this important subject, and it will be found a valuable guide to anyone seeking the application of this new therapy to every-day practice. G. W. R.

Cystoscopy, As Adjuvant in Surgery. With an Atlas of Cystoscopic Views and Concomitant Text for Physicians and Students. By Staff-Surgeon Dr. O. Rumpel, Lecturer in Surgery at the University of Berlin. Only authorized English translation by P. W. Shedd, M.D., New York. With 85 illustrations in color on 36 plates and 22 textual figures. Publishers: Rebman Company, 1123 Broadway, New York. Price, half leather, $8.50.

A very complete work, much resembling Burckhardt and Fenwick's Atlas of Electric Cystoscopy (which appeared in 1893). The author has, in addition to the colored plates, devoted about sixty pages, at the beginning of the work, to the discussion of the following subjects: Congenital Anomalies, Calculi, Cystitis, Foreign Bodies, Hypertrophy of the Prostate, Prostate, Tumors and Testing Renal Function. With the exception of the articles just enumerated, we do not see that the work is much in advance of the one already referred to, which appeared seventeen years ago.

T. B. R.

Medical Diagnosis. By W. Mitchell Stevens, M.D., M.R.C.P., Fellow of University College, London; University Scholor in Medicine (Lond.); Senior Assistant Physician to the Cardiff Infirmary; Consulting Physician to the Royal Hamadryad Seamen's Hospital; Lecturer in Pharmacology in University College, Cardiff. Publisher, H. K. Lewis, 136 Gower St., London, Eng. 25s. net.

This book ought to meet with a favorable reception from the medical profession, as it certainly is one of the most exhaustive

works on this subject for the use of the general practitioner, that has been published during recent years.

The order and arrangement of the sections and sub-sections would be hard to improve. Each subject under its own section is treated naturally, fully and in logical order.

The introductory chapter, consisting as it does of Case-taking, discussed under the headings of "Interrogation of the Patient," and "Examination of the Patient," and the first section on "General Symptoms and General Physical Signs," are so concise and clear, and withal so complete, that these parts alone, as well as the whole book, could not help but be of great value, not only to the general practitioner, but also to the medical student as a book for constant reference.

Each section is a complete, up-to-date, monograph in itself on the subject of its heading. S. J.

Applied Anatomy. The Construction of the Human Body Considered in Relation to its Functions, Diseases and Injuries. By Gwilym G. Davis, M.D., M.R.C.S. Eng., Associate Professor of Applied Anatomy, University of Pennsylvania; Surgeon to the Episcopal, St. Joseph's and Orthopedic Hospitals, etc., etc. With 630 illustrations, mostly from original dissections and many in color, by Erwin F. Faber. Publishers: J. B. Lippincott Company, Philadelphia and London.

One of the best compliments we can pay Professor Davis, in connection with this elaborate work, is to compare it (in so far as comparison is possible between lectures and text-books) to the work of Prof. Macdonald Brown, late of the Royal College of Surgeons of Edinburgh, in his most excellent lectures on applied anatomy. Prof. Brown had the same happy faculty of impressing his students, with his wonderful illustrations, and exhaustive application of the salient points in anatomy in their relation to surgery, that Prof. Davis has evinced in his splendid work. Here, indeed, we have an eminently practical work. To illustrate what we mean by this, take one example: Figure 379 shows a dissection of the palmar fascia, under which wax had been injected, in order to demonstrate where palmar abscesses tend to point. We do not recollect ever having seen anything like this particular illustration before.

And so one might go on giving innumerable examples of the originality and unique worth of the work did time and space permit. Prof. Davis is undoubtedly entitled to the greatest praise for this splendid work. No small part of the success it is bound to achieve being due to Mr. Faber's excellent illustrations.

T. B. R.

Surgery of Childhood, Including Orthopedic Surgery. By De Forest Willard, A.M., M.D., (Univ. Penn.), Ph.D., Professor of Orthopedic Surgery, University of Pennsylvania, etc. 800 pages, with 712 illustrations, including 17 in colors. Cloth, $7.00. Philadelphia, London and Montreal: J. B. Lippincott Company.

There are not many works devoted to the surgery of childhood; that makes this one all the more valuable. The writer speaks with undoubted authority in that large proportion of the work devoted to orthopedics. It speaks with high authority on the subject. For upwards of twenty years the author had been urged to embody in permanent form his great surgical experience. That it has been done, and done so exceedingly well, is of the greatest advantage to surgery, for, almost at its completion, the distinguished author departed this life. He died in his sixty-fifth year. Herein is embodied the best work of a surgeon's extensive practice of over forty years. The publishers are to be congratulated upon it.

Hookworm Disease—Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment. By George Dock, A.M., M.D., Professor of the Theory and Practice of Medicine, Medical Department Tulane University of Louisiana, New Orleans, and Charles C. Bass, M.D., Instructor of Clinical Microscopy and Clinical Medicine, Medical Department Tulane University of Louisiana, New Orleans. 250 pages, royal octavo. Fifty illustrations, including one colored plate. Price, $2.50. C. V. Mosby Company, St. Louis, publishers.

The occurrence of Hookworm Disease in America, especially in the Southern States, has attracted the attention of so many observers that a work on this subject at this time should be of the greatest interest to the medical profession. In this work the authors have carefully reviewed the whole subject of Uncinariasis, and give, in addition, the results of their own important investigations. Special attention has been paid to the study and distribution of the disease in America. While the subject is discussed from the scientific standpoint as well as the practical, the text is easily read, and is well illustrated by photographs and colored plates. The chapter on the symptomatology and the diagnosis should be read by every practising physician. The chapters on the pathology and modes of infection are interesting and well

written. In these are included the experimental work which has been done to date. The work appears in an octavo of two hundred and fifty pages, well bound and illustrated. O. R. M.

Outlines of Psychiatry. By William A. White. Third Edition. 1911. Pp. 272. Price $2.50. Nervous and Mental Disease Monograph Series. No. 1.

It is scarcely necessary to say much by way of criticism of this well-known and deservedly popular volume. The third edition is considerably enlarged and much improved. Amongst the additions are several references of Freud and Jung's work. In the reviewer's opinion, it is at present the most suitable book we possess for students, although, as the author insists, it is in no sense intended to replace the larger books on the subject. The price seems rather high for such an elementary book. E. J.

Catechism Series—Surgery. Part 1., second edition. Edinburgh: E. and S. Livingstone.

This is another of those helpful hint books for students on the eve of examination. It is well set out, and students will find it a valuable pocket book.

Keen's Surgery. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin. Five octavo volumes of 1,000 pages each, with 2,588 illustrations, 136 being in colors. Per vol., cloth, $7.00 net; half-morocco, $8.00 net. Philadelphia and London: W. B. Saunders Company.

Volume V. of this most excellent and comprehensive system of surgery is now before us.

Volume V. completes this up-to-date and comprehensive system of surgery. There is at the present time no better on the market. This volume deals with so many items of great import to both surgeons and practitioners in general that, while being admirably adapted to the work of the former, it will be found equally of importance to the man in general medicine. Indeed, the entire system should be incorporated in the working library of every physician.

The work is of special interest to Canadians. Amongst other contributors are J. George Adami and George E. Armstrong.

Many of the leading surgeons of the world have contributed to its make-up, and for the present the best word has been published on modern surgery.

From the standpoint of the publisher's art, no words of praise are necessary. Saunders have a world-wide reputation as makers of good books.

The Mental Symptoms of Brain Disease. By BERNARD HOLLANDER, M.D. New York: The Rebman Company.

Dr. Hollander has displayed great energy in collecting an enormous amount of material and of clinical cases, in order to prove that there are as definite local areas for mental disturbances as for motor or sensory functions.

He is a strong believer in the materialistic position, that the cortex of the brain is the seat of the whole of the various higher functions, and that there is a definite localized area for each.

The frontal lobes are characterized as the centres of the higher intellectual functions, judgment and reason; the ethical feelings which control the lower instincts—Mania, euphoria and happy states are particularly emphasized as noticeably increased in irritation and hypervascular conditions, while other pathological changes have been noticed where either perception, or memory of various forms, such as for words, figures and tones, are defective.

Finally, the highest human sentiments, our moral nature, hallucinations, and exaltation as distinct from depression, are centred in this important lobe of the brain.

The parietal lobes are on the contrary the focal points for melancholic and depressed conditions and sympathetic nerve properties; while the temporal lobes are related to the instincts of self-preservation, and thus include centres of hunger, thirst and for anger, which may lead to violent or homicidal mania.

The occipital lobes Hollanger refers to are the centres for the affections, while the cerebellum, apart from its co-ordinating functions, is related to sexual instincts.

While, therefore, these advanced views may not appeal to each reader as correct, yet the author has collected an extraordinary number of interesting cases in support of his belief, with the report of many which were cured by local cortical operation.

One must, therefore, say simply "not proven" and keep his views always before us in our cerebral cases, so that we may either assist his well worked out belief or aid in reducing it to a theory.

G. W. H.

Dominion Medical Monthly

And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH.

Epidemic Poliomyelitis, according to present-day enlightenment on the subject, is most probably transmissible by direct contact. Occurrence in the hot, dry and dusty seasons would seem to determine that dust was in some way connected with its prevalence. Then epidemics have been observed to group themselves along dusty routes of travel. Epidemics have died out shortly after rainfall or sprinkling or oiling of thoroughfares.

Taking into account the greater incidence of the disease amongst children and amongst males, the influence of dust is exerted through the outdoor life of these two classes of the community. It may be but a coincidence that the prevalence of this disease in the late summer and fall months corresponds to that season of the year when dust is also more abundant.

On account of this fact, and on account of the horse being occasionally subject to a disease bearing striking similarity to poliomyelitis, it has been suggested that horse manure in dust may carry the infective agent.

Then, too, it has been frequently noted that there is a relationship in epidemic poliomyelitis to paralytic diseases in such domestic animals as chickens, dogs, horses, sheep, cattle and hogs. In the same community, at the same time, man and these animals have been observed to be somewhat similarly affected.

Whilst insect transmission may be a probable factor in inducing

cases of the disease, in the light of our present knowledge the evidence seems contrary to this. But it is well, also, in this connection to bear in mind that the period of the greatest incidence of the disease, that is in our latitudes, May to November, is also the period of the greatest prevalence and activity of insect life. Not until there has been further and closer field study, however, should the influence of insect life be totally discarded.

Although the disease has been observed in practically all latitudes, it may be put down as a summer disease of cold climates. That there are sporadic cases must not be forgotten.

The first book which should be placed in the hands of medical students should be the Code of Ethics of the national medical organization, and each should be urged persistently to read and study it. At least a half-dozen lectures should be given on the subject of medical ethics to mass meetings of the student body in all medical colleges. Before being graduated, all should be required to pass both a written and an oral examination thereon.

To the Code of Ethics of the Canadian Medical Association the profession in Canada looks for its right conduct. To it, also, all provincial and local medical societies go when prescribing rules and regulations for the proper conduct of their individual members. How necessary would it seem that the national medical body should publish its Code of Ethics, and sell copies of it to all medical students and members of the profession.

The Code of Ethics of the Canadian Medical Association was compiled many years ago. In those years great changes have taken place, and in many respects it does not accord with the present-day conditions nor the times in medical practice. It should be revised and shorn of its sentimentalism, its obsolescences deleted, its discrepancies corrected, its practicability better established.

That the national medical organization should undertake to revise and amplify its Code of Ethics seems urgent; that it should do this immediately, many will endorse; that, having well set out a practical Code, and incorporated within its boundaries "pointers" in the way of "help hints" to the profession, will be something which will commend itself to the entire body of physicians the country over.

Its influence in promoting the study and teaching of medical ethics will be of paramount good to the profession of medicine in coming years.

The need of newspapers having a medical censor attached to their editorial staffs becomes more and more apparent and necessary day by day. Not long ago, one of the leading dailies in Toronto—one of the great newspapers of Canada—had so many news items of a medical character that it could very nearly be denominated a medical issue. One item stated a cure had been discovered for tuberculosis, a cure so potent and so efficacious that even advanced cases were alleviated, if not permanently cured, in twenty-four hours. Such rubbish! Such nonsense for an intelligent news editor to insert in the columns of a great molder of thought and public opinion!

As the years advance, newspapers keep abreast of the times. The times bring forth a desire on the part of the public for more information with regard to matters medical as they affect the people. Falsely, the newspapers think they are the pioneers in catering to their readers, but the true pioneers are the public, each year becoming more and more enlightened, and demanding exact information upon all great subjects of public interest. They want the truth and nothing but the truth. They want to gain knowledge at first hand.

The newspapers think they are the best qualified to give this, and that is just where they are making the mistake. They are daily casting broadcast false information. Much of it is not information at all; it is so much flapdoodle—the stuff to feed fools on.

If the people want exact information on water filtration, sewerage, sewage disposal, the prevention of communicable diseases, adulteration of foods, school hygiene, the medical supervision of schools—what not, then the people have the right to get that information truthfully, not through the medium of a lay editor, ignorant of all these subjects, who can use the columns of his paper to promulgate ideas or reforms about which he has no practical or even theoretical information or knowledge.

These vast molders of thought and public opinion, these stupendous self-appointed guardians of the public morals, are frightfully and notoriously inconsistent. Their editorials burn with righteousness, while their advertising pages oftentimes reek with filth. Therefore, a medical censor is doubly needed.

Magazines, too, in this respect are purveyors to the people. On every hand there is a great increase in literature of this class. Time was when a medical man almost took his professional life in his hands when he penned an article on a medical subject for one of even the foremost periodicals. That time has passed. The leaders, the distinguished sons of medicine, may now publish such articles,

and there is no word of criticism, no cry of infringement of the code of medical ethics.

There have been biographical studies of the lives of the time-honored founders of medicine; biographical articles on the discoverers of causes of different diseases; biographical sketches of the institutors of new treatments of disease—and medical journals either publishing the same synchronously, or making comment thereupon, without even the slightest trace of criticism.

Truly, we live in a new day and generation. New customs spring up overnight. Old ones cease between the rising of the sun and the going down thereof. We are entering upon a new era—the era of the prevention of disease, long years ago predicted by Sir Lauder Brunton in these words: "Preventive medicine, or prophylaxis, is daily becoming more important, and possibly before the end of this (nineteenth) century, medical men will be employed more to prevent people from becoming ill than to cure them when disease has become fairly established."

The prescience of this scientist cannot now be questioned. As the medical supervision of schools develops and expands, as the benefits to the human race are seen in future generations, through the careful training and up-bringing of the child by the school doctor, so will society demand for itself medical supervision, and the community will be divided into districts under the direct supervision of the public doctor. It is a practical, not an Utopian, project. It is utilitarian to a supreme degree.

What a powerful influence, then, can the newspaper wield for the good of the community; and what a baleful influence, if misdirected!

The Ontario Medical Association's Preliminary programme is published on another page. The annual meeting this year is to be held in Niagara Falls, Ont., on the 30th and 31st of May, and June 1st—Tuesday, Wednesday and Thursday of that week. It will be seen that the Programme Committee has already been able to get together an unusually fine lot of papers. An enjoyable time is assured, and much profit to all. We urge a large attendance at this meeting. It is due the Association on account of its last year's meeting being incorporated with the meeting of the Canadian Medical Association in Toronto. Dr. H. R. Casgrain, Windsor, will deliver his presidential address at 2 p.m. the first day. Dr. F. A. Clarkson, College and Markham Sts., Toronto, is the General Secretary. He will be glad to furnish any information of the meeting required.

News Items

Dr. H. B. Anderson, Toronto, has sailed for Germany.

Dr. Geo. J. Bull, Paris, Ont., died December 31st, 1910.

There have been over 600 cases of typhoid fever in Ottawa.

Dr. E. C. Beer, Brandon, is studying in Rochester, Minn.

A general vaccination order has been issued in British Columbia.

Brandon, Man., is adopting a system of medical inspection of schools.

Dr. Law, Medical Health Officer of Ottawa, has been asked for his resignation.

Dr. J. S. Helmcken, for many years jail physician, Victoria, B.C., is retiring.

Dr. R. B. Orr, Toronto, has been appointed Curator of the Provincial Museum.

Dr. A. S. Monro, Secretary of the British Columbia Medical Association, is in Vienna.

Winnipeg has purchased the private hospital of Dr. Beath, and will use it as an Isolation Hospital.

Dr. K. C. McIlwraith has returned to Toronto from Washington and the Natural Bridge, Virginia.

The death is announced of Dr. J. Wesley Burns, Caledonia, Ont. Dr. Burns was in his 58th year.

The Association of Medical Officers of the Canadian Militia met in Ottawa, the 23rd and 24th February.

The fourth annual meeting of the Sanitary Services of the Province of Quebec was held in Quebec city recently.

Dr. Frank B. Lundy, Portage la Prairie, Man., is dead, aged 51 years. Deceased had practised in the Portage since 1882.

Dr. A. W. Donaldson, Vancouver, has been appointed senior house physician at the St. Thomas Hospital, London, Eng.

The annual meeting of the Canadian Medical Association will be held in Montreal on the 7th, 8th and 9th June. The General Secretary is Dr. E. W. Archibald, 160 Metcalfe St.

The many friends of Dr. Bruce L. Riordan, Toronto, surgeon to the Grand Trunk Railway, will be glad to hear that he is recovering nicely from a prolonged illness brought about by typhoid fever.

Dr. Chas A. Hodgetts, Ottawa, Medical Adviser to the Committee on Public Health, Canadian Conservation Committee, addressed the Canadian Club, Montreal, on the 20th of February on "Pure Water, and the Pollution of Waterways."

Montreal General Hospital had the biggest year in 1910 in its history. There were treated in the institution 3,586 patients, an increase of 284 over 1909. There were 272 deaths. The average number of patients in the hospital per diem was 205. In the outdoor departments 13,588 patients were treated.

Masseur.—On one of our advertising pages will be noted the professional announcement of Mr. James Russell Hay, who has had exceptional training and experience in London, Edinburgh and Glasgow, under the supervision of several of the most noted and distinguished practitioners of those cities. Mr. Hay has come to Toronto with the best of references, and is located at 187 College St.

The death of Mr. R. L. Gibson, Toronto, took place on Saturday the 18th of February. Mr. Gibson was well and favorably known to the medical profession throughout Canada. He was the Canadian representative of Duncan and Flockhart, The Palisade Manufacturing Company, The Arlington Chemical and others. He was a man exceedingly liked in business circles, of a charming and affectionate manner and a fine type of citizen.

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Original Articles

THE UNTOWARD RESULTS OF DELAYED OPERATIONS AND OF INCOMPLETE OPERATIONS.*

By Alexander Primrose, M.B., C.M. (Edin.), M.R.C.S. (Eng.),
Surgeon to the Toronto General Hospital; Associate Professor of Clinical Surgery in the University of Toronto.

The subject which I have chosen for my paper is of interest to every practitioner of medicine, whether he be a specialist or engaged in general work. I speak from the standpoint of one who has confined his attention to general surgery for a considerable number of years, and there are one or two considerations which prompt one to choose this theme. In the first place, a surgeon, apart from his hospital wards, obtains his patients through a large number of practitioners, and it is quite obvious he must see a larger series of surgical complications than any of the individual physicians who may be of his clientele. It would consequently follow that the surgeon would be in a better position to argue from the general to the particular and would have impressed upon him for example the deleterious effects of undue delay in seeking relief by operation more forcibly than would be appreciated by the practitioner in charge of an individual case. Moreover it is a somewhat delicate matter, when the life of a patient is in grave danger, to argue as strongly as one should that the fatal result, which confronts one as a probable issue, might not have occurred had surgical interference been sought early enough. Many physicians are just as keen for early operative interference in these cases as the

*Address to the Lakeside Hospital Alumni Association, Cleveland, Ohio, January 18, 1911.

most progressive surgeon, but there still remain a number who unwittingly jeopardise the life of the patient by failing to appreciate the importance of calling in the services of a surgeon at a sufficiently early date. It occurs to me, therefore, that, when certain definite conclusions are arrived at concerning the necessity or otherwise of early operation, the surgeon should not wait to emphasize his opinions over the bedside of the patient, but should state his views with no uncertain sound, bolstering up his arguments by reference to his own experience as set forth in his clinical records. The responsibility must be shouldered in individual cases by the physician and surgeon conjointly and whilst it would be an impertinence on the part of the surgeon to suggest to his colleague that, prior to the consultation, the treatment had been in his opinion along wrong lines, yet some opportunity must be taken to impress the profession with the logical conclusions which have been arrived at from the surgeon's standpoint and which would in his belief have changed the issue in many instances had the facts been appreciated by the medical attendant at an earlier stage in the case. There is another class to whom we owe a duty in this respect. I refer to the general practitioner in outlying districts in poorly settled portions of the country, where often, because of the distance to be travelled, or the expense which would have to be incurred, it is impossible to call a surgeon in consultation, and where the general practitioner himself must undertake the operative procedure when it becomes necessary. I believe these practitioners in country districts will sooner or later come to realize that in the cases to which I refer, early operation is not only the safer procedure, but is always a simpler undertaking and is more likely to succeed if proceeded with before serious complications have arisen. Lastly I may point out that where surgical interference is undertaken late and fails, it is surgery that is blamed for the result when often the responsibility should actually lie with the medical attendant who has not realized that operative procedure was indicated at an earlier date in the case.

When one embarks on a consideration of this theme, one realizes that the whole field of surgery might come under review and generally speaking the moment any operation is demanded, then the sooner it is carried out the better. My object however is to deal mainly with a class of cases concerning which there has been considerable controversy in the past, but about which there should now be absolute agreement. If that agreement is to be reached however, it must be arrived at by careful study of the results obtained by the surgeon along with those obtained by purely medical means.

To illustrate my meaning I may refer to appendicitis. A physician may have an extensive experience and he will tell you that he has never lost a case of appendicitis and yet he has seldom required the services of a surgeon. On the other hand if you ask any surgeon of experience to-day he will tell you of many lives lost because operation was delayed and one is convinced that if the physician mentioned above stopped seriously to consider the statistics which any general surgeon could furnish regarding operation in appendicitis he would never again let a patient with a definite attack go twenty-four hours without operation because the risk he runs is too great.

There are many emergencies in which the necessity for immediate operation is quite obvious. Thus when hemorrhage is taking place from a severed blood vessel it is obviously essential to control the bleeding point if possible. The necessity for immediate operation is quite as obvious in the case of severed nerves, but this fact is perhaps not as clearly recognized. We may conclude too that immediate operation is indicated when a typhoid ulcer of the intestine has perforated, or if there has been a rupture of the stomach or intestine into the peritoneal cavity from any cause, traumatic or otherwise, or in a case of strangulated hernia. On the other hand there is another class of cases regarding which there must still be some controversy and concerning which very definite and very different views may be held by those who have studied such cases conscientiously and with ability from every point of view, such for example as the indication for operation in Graves' disease or the relief by operation of pyloric spasm in infants. I wish, however, to emphasize in this paper the deleterious effects of delayed operation and the baneful results of incomplete operations in cases regarding which there is perhaps less material for controversial argument, but concerning which we must admit the results possible by surgical intervention are often not attained because operation is postponed unduly or carried out inefficiently.

I will confine my remarks mainly to two series of cases, first, those in which we undertake operation in inflammatory conditions and those in which we operate for malignant disease.

First, then, we may consider certain inflammatory conditions which do not brook delay. I have referred already to appendicitis and I may add a word or two further with regard thereto. One must appreciate the fact that the technique of the operation for appendicitis has been considerably modified of recent years and the effect of this has been to reduce the mortality more particularly in the cases operated on late. For example, we no longer wash out the peritoneal cavity, but confine our attention to the seat of local

infection, and provide drainage if necessary, being always careful to disturb the general cavity as little as possible. More recently the technique has changed as regards the treatment of the appendix in pus cases. At one time it was the rule when a localized abscess was discovered to leave the appendix, which, it was thought, might form part of the wall of the abscess. The argument was advanced that we should not destroy nature's barrier by excising the appendix. There are two considerations which, however, were forgotten in this routine, one is that the conditions necessary for confining the infection to a definite district are different in the closed peritoneal cavity and in the cavity where drainage is provided, and the other is that by removal of the diseased appendix the most important factor in maintaining the local infection is removed. We have learned by actual experience that it is best to remove the appendix and establish drainage; since adopting this method of procedure the writer has never seen general peritonitis arise from a local abscess and one finds that most surgeons are now adopting this view. There may be very exceptional cases, where one cannot remove the appendix, such as in one instance, where the cecum and surrounding structures were so edematous that one was unable to locate the appendix after considerable manipulation, and one thought it prudent to desist, but these cases are rare and in the vast majority of instances the appendix can be and ought to be removed. In the author's clinic importance is also placed on the Fowler position and continuous saline injection per rectum in cases of general peritonitis.

Whilst however a better technique has lowered the mortality in advanced cases we still recognize the fact that the main cause of the fatal issue in individual instances is delay. One of the most recent analyses of a large series of cases is that of McWilliams of the Presbyterian Hospital, New York, for the years 1906 to 1909 inclusive. He reports the result of 1,411 operations for appendicitis in that hospital. Of 512 operations in the chronic and relapsing condition there was a mortality of 0.5%. Of the 687 operations in presence of acute conditions there was a mortality of 9.8%. The following table shows that the mortality increases enormously after the first day of the disease:

Duration of Disease at the Time of Operation

Day of Disease	No. of Cases	Died	Mortality Per Cent.	Combined Statistics	No. of Cases	Died	Mortality Per Cent.
1	135	5	3.7	On or before the second	280	14	5.0
2	145	9	6.2	day			
3	103	8	7.7	From the third to the	251	32	12.7
4	72	13	18.0	sixth day inclusive			
5	55	8	14.5				
6	21	3	14.2				
7	48	10	20.8	From the seventh to the			
8	11	2	18.1	tenth day inclusive	79	16	20.2
9	5	1	20.0				
10	15	3	20.0	From the tenth to the			
11	4	1	25.0	fourteenth day inclusive	52	8	15.3
12	5	1	20.0				
13	1	0	.0				
14	27	3	11.1				
17	1	0	.0	All acute cases operated			
21	5	0	.0	upon after the sixth			
Data Missing	34	1	.0	day	156	21	13.4
Totals	687	68	9.8				

Our own statistics would conform very closely with the above, and the fact is generally recognized that the mortality increases with delay; yet this fact is not appreciated in its full significance, otherwise there would not continue to be so much delay in calling in the services of a surgeon. As already stated, the physician is naturally guided by his own experience, but we insist that the results of surgery must always be more conclusive because of the larger opportunities afforded for the study of the harmful effects of delay. A physician may carry a large number of cases through successfully without operation and may even be fortunate enough to have his late cases recover after a delayed operation, but the results of surgery show that he is courting disaster and will sooner or later come to realize by sad experience that the risk he is running is quite unjustifiable. In reviewing one's own records one finds that the harmful effects of delay are demonstrated in a variety of ways. Abscess formation frequently occurs with long continued suppuration and persisting sinuses which after final closure leave a weak abdominal wall requiring repair for "post-operative rupture." One very common and fatal complication in delayed cases is perforation, and one may pause to enquire if it is possible to anticipate such a disastrous occurrence. The fact is, perforation occurs often in the most unexpected circumstances. A patient may have what

is apparently a mild attack and after twenty-four hours the pain has become less, the temperature little elevated and the pulse normal, then possibly a purgative has been administered and perforation occurs, throwing the victim at once into a condition in which one realizes that there is grave danger of a fatal issue no matter how promptly the abdomen is opened. Here let me emphasize with all possible force the danger of a purgative in acute appendix cases; the possibility of such measures doing grievous harm is too well known to every surgeon. The purgative may induce perforation, or what may prove equally disastrous, the rupture of a localized abscess into the general peritoneal cavity. Quite recently the writer was arranging to operate for the radical cure of femoral hernia, two days before the date fixed for operation the patient was ordered a purgative, but before taking the medicine she telephoned to me that she had severe abdominal pain. She was instructed not to take the purgative until I saw her, and on examination, and after consultation with her physician, it was determined that she was suffering from an acute attack of appendicitis. I operated in the middle of the night and removed an appendix which might well have perforated had the purgative been given. She made a good recovery and the operation for radical cure of the hernia was successfully carried out three weeks later. I considered one had made a fortunate escape in avoiding the complication of appendicitis in an operation for femoral hernia, and it was fortunate, also, that the patient had sufficient prudence to ask my advice before taking a purgative when suffering from acute abdominal pain.

Incidentally one may remark that the whole difficulty in determining the time to operate in appendicitis is largely the difficulty in diagnosis. It is impossible to determine by the physical signs as to the nature of the individual attack, for example, whether the appendix is gangrenous or not. The pulse, temperature and leucocyte count are all useful clinical guides, but neither these nor the severity of the pain, nor of reflex symptoms of vomiting, etc., are sufficiently characteristic to assist us in differentiating the simple cases from those of the most dangerous form, and until an accurate clinical diagnosis can be made our only safe course is to remove the appendix the moment a definite diagnosis of appendicitis is made. There may be some instances where the general condition of the patient, or his surroundings may necessitate delay, or may cause one to conclude that the direction of least risk lies in temporizing, but these cases are exceptionally rare.

What has been said regarding the effects of delay in acute appendicitis applies with equal force in other conditions within the

abdomen. Thus, in cholecystitis, we have possibilities which are comparable to those presenting themselves in acute appendicitis, and whilst it is more rare to have a ruptured gall bladder than a ruptured appendix, yet it occurs occasionally, and it is gradually becoming recognized more and more widely by the profession that when cholecystitis presents acute symptoms operation should not be delayed. But further the persistence of chronic inflammation here should undoubtedly demand operative interference. The possibilities of acute empyema and perforation of the gall bladder must always be borne in mind as a complication in the course of chronic disease and many other serious conditions may manifest themselves, particularly when gall stones are present. I recently operated on a patient who had suffered for years from gall stone colic, and finally, during an acute exacerbation, operation was undertaken; a large solitary stone surrounded by pus and mucus was ulcerating through from the gall bladder to the stomach where adhesions had formed. In another recent case the patient had suffered for ten years and for the past five years endured pain of great severity, at each attack necessitating large doses of morphia to control it. Operation revealed numerous gall stones (440 in all) with extensive adhesions of the gall bladder to neighboring viscera. I need not multiply instances, but surely here again the enormous advantage of early operative interference is clearly demonstrated. Patients, too, may suffer for prolonged periods with stone in the common duct, and when finally operation is undertaken the duct is often enormously dilated, the gall bladder and ducts the seat of septic trouble and a mass of peritoneal adhesions gluing the various viscera together in an almost inextricable tangle. Further, these patients with gall stones frequently develop a pancreatitis and run considerable risk of cancer. On an average one in thirty cases of primary cancer of the gall bladder, according to C. H. Mayo, has developed cancer as a local condition around a gall stone which has mechanically irritated some mucous area of the gall bladder tract.

Malignant disease: Turning now our attention to malignant disease, we again must voice the experience of all general surgeons in recording the many sad instances where delay is disastrous and often fatal. It is not necessary to dwell on this part of my subject, because the facts which one might illustrate over and over again from one's clinical records, are universally recognized by the profession. In this instance it is, perhaps, the laity who require to be educated as to their duty. The prevalence of cancer is observed more accurately than heretofore. The most accurate statistics are probably available in Great Britain, and Bashford, in the Third

Scientific Report of the Imperial Cancer Research Fund, shows that the chance that a man over 35 years of age will die of cancer is one in eleven, and the chance of a woman above the same age is one in eight. Bashford has further come to the conclusion that "the number of deaths assigned to cancer increases from one country to another in a manner parallel with the increasing accuracy of the vital statistics of the several countries." Whatever may be the exact figures, it is obvious on the most superficial inspection that cancer is a very prevalent disease, and apparently it is on the increase, although Bashford is inclined to think that the most recent figures do not prove an actual increase in cancer, but that the apparent increase is due to the more accurate methods of reporting cases which at present obtain.

A large amount of work is being expended on the study of cancer in the laboratory, and much has been done to clear the ground for work which we are all optimistic enough to think will eventually prove of material benefit to mankind in the eradication of this wide spread scourge. Clinical experience has, however, offered abundant opportunity for observation as to the course of the disease, and of the results obtained by the treatment of malignant disease on a great variety of lines. To-day we find surgeons practically unanimous in concluding that early and radical operation holds out the best prospect of cure. If we had to choose between the two we might urge that it is more important for the operation to be early than that it should be radical, because statistics have shown that in cancer of the breast at all events more cures are effected by early incomplete operations than by extensive late ones. It is therefore obvious that this doctrine should be taught the laity and that early relief should be insisted upon by the medical attendant in every instance. Formerly patients were sent to hospital for surgical treatment after the medical attendant had watched the growth carefully for weeks or months until he was quite sure it was malignant and demanded surgical interference. Now fortunately things have changed and patients are sent when a growth appears which may or may not be malignant. The surgeon operates and by quick section will determine beyond doubt the character of the growth and will act accordingly. Unfortunately, however, there are some in the profession who have not yet awakened to the importance of these observations, and we must continue to reiterate facts until the victims of cancer will all find relief at an early date and will no longer present themselves when the hope of relief by operation has vanished.

One lesson surgeons are slow to learn, and that is the futility

of operating in advanced cases when the possibility of eradicating the disease no longer exists. The advice of Hippocrates is still sound for advanced cases, when he says: "It is better not to apply any treatment: for if treated the patients die quickly; but if not treated they will hold out for a long time." Let me illustrate my point by citing the case of a woman, æt. 48, who developed a tumor in the breast and was treated by Christian Scientists until the tumor assumed large proportions. When first seen by the writer the entire breast was a hard cancerous mass, adherent to the chest wall, and about to ulcerate on the surface, several secondary nodules existed in the skin near by, axillary and subclavicular glands were enlarged and the woman was markedly cachectic. I considered the case inoperable and refused to interfere surgically. She, however, was taken by her friends to consult a prominent surgeon in the United States, a man for whom I have the greatest respect for the important contributions he has made to surgery. To my surprise he attempted a radical operation, but desisted after reseeting a rib and finding the pleura involved. The patient died a few days afterwards in the hospital. Now I believe such operations do harm; the case undoubtedly was absolutely inoperable. If there is the least possible chance of benefiting a patient by operation nothing should dissuade us from doing so, as our patient's welfare is the only desideratum, but operation where no possibility of success exists does harm in two ways, first, the public, who are uninitiated in the clinical course of cancer, think that if surgery has failed to relieve in such a case it is therefore valueless in any case, early or late; and again it deprives one of the opportunity of teaching the laity that it is possible to seek surgical aid too late for radical relief, and I believe much good will be accomplished if we refuse to operate in hopeless cases, and if by this means we teach a lesson which may have the effect of saving other victims from such a sad fate. This point was emphasized very strongly by C. H. Mayo in his address as Chairman of the Surgical Section of the American Medical Association recently.

In order that a radical operation should be done early, the diagnosis must be made early. This is by no means an easy matter in the majority of instances. Take for example breast tumors in which we suspect malignancy by noting the age of the patient, the connection with the skin, the consistency of the tumor, the existence of palpable axillary glands, etc., yet the most astute diagnostician will fail at times to establish a correct diagnosis. Surely under these circumstances it is justifiable to remove a benign growth where the possibility of malignancy exists, rather than run the

risk of a mistaken diagnosis. This fact is emphasized when we consider the absence of risk in removing such a growth and the further stern fact that of all cases of carcinoma of the breast operated on we can only count on from 20% to 40% of cures. All surgeons are optimistic enough to believe that the percentage of cures will be increased as we educate our patients to seek relief early in the disease. It is always prudent to have a quick section made at the time of operation in doubtful tumors, and since the introduction of this routine practice much good has been accomplished. Let me further urge that all tumor tissue removed should be subjected to routine histological examination. This is done as a matter of course in every well appointed hospital clinic, but let me pause to ask why it is not done in every section of the country. Our students are taught the use of the microscope and the value of histological examination in various pathological processes with a thoroughness which never hitherto existed, and yet it is astounding to find how few of our younger graduates in country districts possess a microscope! One finds, however, that the man who continues the study of minute anatomy after he had entered practice will command the confidence of the public more than his colleague who fails to do so, and thus it is obvious that sooner or later the microscope will become, as it should become, as indispensable in the armamentarium of the practitioner as the clinical thermometer or the stethoscope, and it will be appreciated, also, that it is in the selfish interest of the practitioner to use it.

The importance of routine histological examination may be instanced in the case of one of the author's patients, a woman æt. 50, who, when first seen, gave a previous history of enlarged glands on both sides of the neck. At the time she sought advice she had a temperature of 104° with a painful edematous swelling on the right side of the neck where I opened a postpharyngeal abscess. Nine days afterwards I found a similar abscess on the left side of the neck. Four months subsequently, because of tumefaction in front of the sterno mastoid muscle, I made an incision and cut through what was apparently dense cicatricial tissue. Subsequent microscopic examination of the tissue revealed, what we had hitherto not suspected, nests of epithelial cells embedded amongst dense fibrous tissue. A search was now made for the primary growth, which was found to exist in the larynx below the vocal cords and which subsequently infiltrated the pharyngeal wall.

Whilst thus insisting upon the necessity for microscopic study, and more particularly the great advantage of a quick section during an operation for tumor, let me utter a note of warning and urge

that in a percentage of cases, fortunately a very small percentage, the most expert histological pathologist may mislead one. This was well demonstrated in the case of a woman, æt. 49, with a tumor of the breast which she had noticed three years previously. There were palpable glands in the axilla, and the mammary tumor which lay immediately beneath the nipple appeared to be attached to the skin, although no marked retraction of the nipple existed. I did the usual radical operation with removal of the breast and pectorals and of the axillary glands. The pathologist first reported the breast tumor a chronic mastitis without malignancy, but on subsequent examination of the axillary glands he found they were carcinomatous. Subsequently a careful search over the breast tumor was successful in finding undoubted carcinoma in a small focus surrounded by a large amount of chronic inflammatory tissue. Again one must not jump to the conclusion from the study of such a case that the key to the situation is to be found in the enlarged gland, because it is well known that indurated glands may be purely inflammatory in conjunction with a primary malignant growth. This is notoriously the case in malignant growth of the stomach and should always be considered when determining the limitation of operative interference.

One should bear in mind that in various manifestations of malignant disease the magnitude of the secondary growth may entirely overshadow the primary, and the latter has in many instances been entirely overlooked, as in the case cited above. I might give other instances from my note book illustrating this point. Here then it is one's duty, if a complete eradication of the disease is to be accomplished, to make a thorough search for the primary growth when we find carcinoma in the glandular tumor. If it is essential in such cases to find and remove the primary growth it is equally clear that where we are dealing with a primary cancer growth we should not wait for gross secondary manifestations in the lymphatic glands, but should proceed at once to remove the glands and gland-bearing fascia of the region likely to be involved. The importance of this is evidenced all too frequently in the past as in the case of a man 64 years of age who had a carcinomatous ulcer the size of a twenty-five cent piece removed from the inner side of the cheek and then came to the hospital fifteen months subsequently with a large secondary growth in the submaxillary glands, necessitating an extensive dissection with little hope for radical cure. Or again the necessity for this method of procedure may be demonstrated in another way when after removal of the primary growth and of the glands and fascia, which show no gross signs of secondary

involvement, we find on microscopic section that cancer cells are already present in the glands. A single instance of this latter possibility is sufficient argument to show conclusively that the removal of the glands, whether involved or not, should form a part of our routine practice in dealing with malignant disease.

The results obtained by the modern method of performing a radical operation for cancer of the breast fully justify the routine removal of the whole breast, the pectorals and the axillary glands and fascia, but the earlier a radical operation is undertaken the more the prospect of cure is enhanced. Yet this fact is not appreciated to the extent it should be, thus quite recently I operated on a woman 77 years of age, who had had a small tumor removed from the breast six years previously, local recurrence was first noted some five years after operation with secondary axillary growths. Had a radical operation been done in this woman's case at the outset, one believes that recurrence would have been most unlikely, particularly at her age. Too often these small growths are excised and not even submitted to microscopic examination. We too frequently see the pernicious results of such practice, and one feels it one's duty to protest as strongly as one can against it. The fact is a practitioner may have only one or two such cases in a long period of years, and he is perhaps not to be blamed if he fails to realize the gravity of such a case and the responsibility he assumes in treating it. It is the duty of the surgeon, therefore, to use every opportunity to teach the lesson of the necessity for early and radical measures in such cases.

Reference has been made in this paper to malignant disease in the neck. Crile has urged with force that cancer in the head and neck is primarily a local disease, and that "the collar of lymphatics of the neck forms an extraordinary barrier through which cancer rarely penetrates." On those grounds he has urged that the technique, if mapped out on the basis of logical argument, must be a "block" dissection of the regional lymphatic system as well as the primary focus, applying the same principles here as those which are now universally adopted in the excision of the breast with the pectorals and lymph glands for cancer. We concur most heartily with these conclusions, experience teaches us the wisdom of such a course, and the absolute folly of incomplete operation. Important nerves, blood vessels and muscles must be sacrificed if need be to secure our end, the only limitation being the danger to life or the degree of disability ensuing from our interference with important structures, the length to which we must go in the individual case being determined by consideration of the extent of

the disease and the dissection necessary to ensure its complete and permanent eradication.

There can be no doubt of the fact that the necessity for early and radical operation in the conditions cited in this paper is more fully recognized every day. This fact is evidenced in McWilliams' table quoted above, in appendicitis for example where we find that by far the largest number of operations were performed early, and comparatively few instances of late operation are recorded, but the table also shows that as many cases (145) were delayed to the second day as were operated upon on the first day, in spite of the fact that the mortality was twice as great on the second day. Comparatively few, however, were postponed until the fourth day, when the mortality was five times as high. Similarly in malignant disease opportunity for early interference and the performance of radical operations with the utilization of every means at our disposal for an accurate diagnosis are fortunately much more common than heretofore. Nevertheless, we frequently have patients brought to us for operation at an advanced stage of the disease, when it is all too certain that radical relief is impossible, hence the importance of continuing to insist upon early and radical treatment as a necessity if we are to preserve the health and life of our patients in a manner rendered possible by modern methods of treatment.

FORECASTS OF MEDICAL PRACTICE IN THE FUTURE.

By T. D. Crothers, M.D., Hartford, Conn.,
Superintendent, Walnut Lodge Hospital.

Articles in different medical journals of recent date having taken a rather gloomy outlook of the future so far as concerned the medical profession, led Dr. Crothers to write this paper.

Whilst physicians are constantly increasing, disease decreasing, longevity getting greater every year, and preventive medicine controlling sickness and disease, the field of the medical practitioner grows smaller.

People are taught to take better care of themselves, health books are multiplying—all to the disadvantage of the doctor. The annual income becomes less as hospitals, dispensaries and medical charities increase; hence the complaints.

Every year physicians drop regular work for financial reasons. Someone has recently estimated the annual income of physicians at less than $900 per annum, which is certainly very discouraging after having spent from $2,000 to $5,000 on medical education. This remuneration is that of a clerk or a carpenter.

Then, too, standards are being raised, education longer and more expensive. A literary education, a university degree, a year's hospital training becoming to be required adds to the cost. When he goes into practice, what with bad accounts, competition with unlicensed practitioners, he can scarcely make ends meet.

And it sounds strange that as receipts from practice grow less standards are to be increased and the cost of obtaining a medical education advanced.

The incompetent rival often does better than the high-grade graduate. When quacks and irregulars are permitted to do medical work no wonder that practice occupies a very uncertain position.

There are two classes of medical colleges, the university with its hospital and laboratory attachments, and those with limited facilities, the proprietary schools, the money-makers for their shareholders. It is not always from the former that the successful ones come. In fact it appears to be more otherwise, the graduate from the inferior school equalling if not surpassing the graduate from the properly-equipped university school.

What is wanting? The graduate of the inferior school in his own interests is forced to become active, whilst the other becomes self-satisfied and contented.

The highly-trained medical student has not the same stimulus to work that his less fortunate brother has, who continues to be a student all his life.

Is the small college to be driven out? Must an expensive course be the road to a diploma? Must the profession take legal steps to prevent the irregular and untrained man from practising? Shall we advocate the man to practise medicine above 'pathies and schools?

One fault lies in the lack of determination of capacity. There are teachers out of their spheres. There are surgeons who should not be operating. Even there are specialists out of their spheres.

A new range of practice is looming on the horizon—preventive and scientific medicine—and the physician of the future will be retained the same as a lawyer. His work will be advising and consulting; he will be paid for as such. He will make regular visits

to the homes and become acquainted with the home life of the family.

Already this has been put in practice in some of the large cities with most promising results. When this is the case, Christian Science and Emmanuel movements will cease and the patent medicine business will get its quietus. Epidemics will be speedily checked or prevented altogether. This is the ideal towards which practical medicine is leading, and for it he will receive proper compensation for his skill and judgment. It is a pure growth from lower to higher ideals, and neither legislation, examining boards, nor college regulations will bring it about. Quackery and ignorance will take care of themselves.

Destroy machine-like demonstrations, break up narrow materialistic views, make college training practical and the great question of finding the right man for the right place will be solved.

Begin revolution and evolution in the medical colleges first; and before the end of the century the medical profession will lead the triumphant march.

Asthma.

Weiss (*Therapie der Gegenwart*) states that an inhalation of an atropine spray or painting the nasal mucosa with atropine-cocaine solution frequently arrests an attack of asthma. The region behind the uvula, the tonsils and their vicinity is the seat of the spasmodic contraction. Free the respiration centre from morbid reflex stimuli and the action of toxines and there will be no further disturbance so long as the paralyzing action of the drug lasts on the region mentioned.

Wounds.

The treatment of wounds with alcohol according to H. T. Bahnson (*Int. Jour. Surgery*) exhibits two principles, namely, absolute rest of affected limb and the envelopment of the whole limb in a loose, voluminous dressing of gauze and absorbent cotton, kept constantly wet with 15 to 20 per cent. solution of alcohol in a saturated solution of boric acid, to which Ochsner adds 5 per cent. carbolic acid solution one part. Cover to prevent evaporation and retain warmth. The whole dressing should be kept wet and the dressing should be renewed in forty-eight hours. The second dressing is usually sufficient to entirely overcome the sepsis. If the case demands it Bahnson uses pure alcohol.

Surgery

Walter McKeown, Herbert A. Bruce, W. J. O. Mallock, Wallace A. Scott, George Ewart Wilson.

Some of the More Rare Causes of the Acute Abdomen. By Mr. William Henry Battle, F.R.C.S. (Eng.). *The Lancet.*

Battle deals with acute hemorrhagic pancreatitis, acute dilatation of the stomach, and with some neuroses which may cause symptoms of urgency.

In acute hemorrhagic pancreatitis the symptoms are so urgent and accompanied by so much pain that operation is usually permitted. On opening the peritoneal cavity early there may be nothing abnormal revealed, and the small amount of blood-stained fluid may be overlooked, and there is no fat necrosis as yet.

Fitz wrote: "Acute pancreatitis is to be suspected when a previously healthy person or a sufferer from occasional indigestion is suddenly seized with a violent pain in the epigastrium, followed by vomiting and collapse, and in the course of 24 hours with a circumscribed epigastric swelling, tympanic or resonant, with a slight rise of temperature."

On examination, the abdomen is not rigid, but is more resistant than normal. There has been a diffused superficial tenderness, especially on unexpected light palpation. There has been patchy resonance over the abdomen without evidence of free fluid. The movements during respiration have been good. The pulse is rapid. There is a rise of temperature and an anxious countenance.

The diagnosis is to be made from perforations of the stomach, appendix and gall bladder. From acute intestinal obstruction, acute irritant poisoning, and from such rare conditions as rupture of a liver abscess, embolism of the mesenteric artery, etc.

There are reports of two cases of acute dilatation of the stomach, one of which died. In the first case the stomach had become a mere fluid-containing sac with a thin wall which covered the intestines and gave a dull note on percussion across the middle line.

There is a report of a case of hysterical vomiting of blood. There was vomiting daily, without relation to food of large quan-

tities of fluid containing a good deal of evenly diffused blood. In spite of this fact there was no anemia.

Gastric hemorrhage has sometimes a purely nervous origin. Enterospasm. By this term is meant "a condition in which there is a spastic contraction of the muscular wall of some part of the intestine. This may cause symptoms of varying intensity, from those of chronic constipation to such as simulate acute intestinal obstruction." W. A. S.

Report of Two Successful Cases of Removal of the Spleen for Splenic Anemia. By G. A. Sutherland, London, and Mr. F. F. Burghard. *The Lancet.*

On admission, the blood count in case number one was 2,420,000, the hemoglobin being 40%. Three days after the operation the count was 4,700,000, and the hemoglobin 76%.

Case No. 2 gave a count of 1,870,000, and hemoglobin 30% a week before the operation, and a count of 4,000,000 and a 52% of hemoglobin 4 days after the operation.

The details of the operation are described.

"If we assume a loss of vaso-motor control in the splenic artery leading to overfilling of the spleen with arterial blood, it is possible to understand all the morbid changes in the blood. The spleen itself would be enlarged and its substance generally. Malpighian corpuscles, endothelial cells, connective tissue, etc., would be in a state of active hyperplasia. This is the usual condition found after splenectomy and post-mortem, with the added changes which time has brought in prolonged cases. At the same time the functional activity of the spleen would be increased, and the function which is usually ascribed to it, that of removing red corpuscles by means of its large endothelial cells. Instead of mere scavengering work it is easy to understand that these endothelial cells, in greatly increased numbers, may attack not only effete cells, but those which are healthy, and that active hemolysis and destruction of hemoglobin follow." W. A. S.

THERAPEUTIC TIPS

Stiffness of Knee.

T. Miller (*Muench. med. Wochen.*). In cases of stiffness of knee following injuries and operations, recommends that mobilization of the knee be done under anesthesia, and fixation of knee in extreme flexion for twenty-four hours. The leg should be suspended so that it will swing freely. Then rest of the leg in bed without support, falling naturally in flexed position. No dressing is required. Massage can be carried out readily.

Intestinal Flatulence.

Boas (*Berliner K. Woch.*) advises exclusion of fermentable foods from patient's diet. Their tolerance of foods must ever be kept in mind. Potatoes, milk, buttermilk, eggs and rare meats are apt to produce fermentation. The best antifermentative is magnesium salicylate. It does not cause constipation. He gives from fifteen to thirty grains three times a day. Where there is constipation and catarrhal inflammation small repeated doses of castor oil are recommended.

Pyelitis in Infancy.

Joseph Brennamann (*J. A. M. A.*) advises rest in bed, diet watched, abundance of liquids, either water or alkaline waters. English writers, notably Thompson and Still, prescribe large doses of potassium citrate, one-half a drachm to a drachm three times a day. The essential treatment is to render the urine neutral. Thompson says: "The alkaline treatment must be continued for a week or two at least, in spite of the depressing effect which it has on the child's general condition and the loss of appetite it is apt to occasion." German and American clinicians advise urotropin and salol.

Removal of Foreign Bodies from Oesophagus.

William Lerche (*J.A.M.A.*) says the first step in removal of foreign bodies from the œsophagus is to anesthetize with 10 per cent. solution of cocaine the pharynx, the pyriform sinus and the inlet of the œsophagus. The œsophagoscope, without the obturator, is introduced under the guidance of the eye, and when the foreign body comes into view its position is noted, and with special forceps it is carefully dislodged and extracted. In the case of sharp foreign bodies, the bougie or the probang should never be used. Sometimes it may be necessary to cut or break a foreign body, and for this purpose Kahler's forceps are useful.

Reviews

Phases of Evolution and Heredity. By Dr. David Berry Hart, M.D., F.R.C.P.E., Lecturer in Midwifery and Diseases of Women, School of the Royal Colleges, Edinburgh; Late Examiner to the Universities of Edinburgh, Oxford, Birmingham, Liverpool, and to the Royal College of Physicians, Edinburgh. New York: Rebman Company. Price, $2.00.

In brief, compact form we are introduced by the author to theories of evolution and heredity, including Darwinism, Weismannism, Mendelism, Biometry and Mnemism. The author himself adds his own views to these different ideas, and is a great believer in the law of probability. These chapters are excellently suited for any reader who desires to grasp these primeval laws with ease and to have a guide to direct him in further reading.

The remainder of the book is devoted to a series of chapters on different but related subjects. While perhaps they are not very scientific, yet they are most readible, and that particularly on the Honey-Bee is charming.

The subjects of Evolution in Religious Belief and the Handicaps of Sex seem to be rather too briefly and superficially discussed, but they fall in with the whole structure of the book, namely, brevity.

G. W. H.

Anemia. By Dr. P. Ehrlich and Dr. A. Lazarus. Part I. Volume I. Normal and Pathological Histology of the Blood. 2nd Edition. By Dr. A. Lazarus and Dr. O. Naegeli. Translated by H. W. Armit, M.R.C.S., L.R.C.P. New York: Rebman Company. $4.00.

Ehrlich has been unable to rewrite the second edition of "Anemia," but his former collaborator, Lazarus, has accomplished the task, assisted by another of Ehrlich's associates, Naegeli.

This volume is a most satisfactory one in every way, and can be highly recommended to every physician who wishes to possess an up-to-date book on hematology.

The introduction deals with the clinical methods for examining the blood, advises the most suitable apparatus for different pro-

cedures, shows the errors that occur, and eliminates the clinically valuable from the merely scientific methods.

The second chapter discusses the morphology of the blood, including the making, fixing and staining of dry films, and this work on staining alone is invaluable. The glycogen, alkali and sugar tests, as required in blood examination, are described, and the chapter completed by a complete description of the red cells of all types, with a discussion on each question that has interested all workers in hematology, such as the cause of polychromatophilia, poikilocytosis, fate of the nucleus.

The third chapter is devoted to the white blood corpuscles, normal and pathological, and contains a magnificent description of everything one should wish or require to know. Cell granules are exhaustively described, leucocytosis according to Ehrlich, and finally a section on leukemia concludes the article.

A short chapter on the blood platelets is followed by five beautiful plates.

The book needs no favorable comment, it is a necessity, and the edition should be rapidly sold out. G. W. H.

Modern Treatment of Alcoholism and Drug Narcotism. By C. A. McBride, M.D., L.R.C.P. & S. (Edin.). New York: Rebman Company.

The earlier chapters in this book are disappointing, the article on pathology, particularly, being extracted from other authors, while that on the causes of inebriety chiefly interests us because of the frequent reference to Canada, and Toronto in particular. "During three months visiting between Montreal and Chicago, I was never offered or saw any alcoholic beverage in any house but one, where half a bottle of whiskey was kept for medicinal purposes."

"An Englishman, staying at the Queen's Hotel, ordered a small Bass daily for his luncheon, but discontinued it, as it made him conspicuous."

Dr. McBride divides alcoholics into four classes, namely, the constant drinker, the periodical, the dipsomania, the voluntary and mixed cases, and his description from his large experience of these cases is worth reading carefully.

When, however, we reach the subject of treatment, which occupies one-half the volume, one is able to read one of the clearest, most delightfully expressed, and one of the most valuable treatises on the subject of alcoholism that has ever entered print.

For the voluntary drinker there is advised moral treatment, restraint and institutional methods, but for the diseased patient of the constant and periodical class, the man with a "craving" for spirits, these popular methods are useless. Dipsomania, of course, requires most careful control.

For these patients with true alcoholic disease, the author entrusts us with his own method of cure, "a strychnine and atropin" plan of medication, requiring six weeks treatment, and resulting in cure in a vast number of cases. The same methods are applied to many of the drug habits.

No further review or commendation of this volume is necessary, but if Dr. McBride's results are as good as he claims, and there is no reason to doubt them, then this book, with a title that would not attract many readers nor appeal to many medical book collectors, is worth its weight in gold. Practical physicians with alcoholic patients are advised strongly by the reviewer to read this book.

G. W. H.

A Handbook of Practical Treatment. Edited by JOHN H. MUSSER, M.D., and A. O. J. KELLY, A.M., M.D., both of the University of Pennsylvania. Published by W. B. Saunders Company. 1911. In 3 volumes.

The first volume of this voluminous work, just issued, reaches almost 1,000 quarto pages, and is indicative of the completeness aimed at by the editors. Among the subjects dealt with, in each case by a writer of note, are, Principles of Treatment, Dietetics of Adults and Infants, General Principles of Treatment by Drugs, Organo-Therapy, Serum-Therapy, The Use of Rest, Climate, Hydrotherapy, etc., and certain surgical methods.

The methods of treatment of disease have so advanced in recent years that such a work, including as it does the most modern discoveries, is most timely, and should prove a sufficient answer to that school of "Therapeutic Nihilism" which has been wont to decry therapeutics.

The scope is very comprehensive, but no space is spared each writer so that he may present his subject in sufficient detail to be of real service as a guide to others, hence the great practical value of this work to the practitioner of medicine and surgery.

It is interesting to note that out of 22 contributors, 11 are from Philadelphia. Sir Lauder Brunton alone represents England in a short article.

G. W. R.

A Manual of Physical Diagnosis. By Brefney Rolph O'Reilly, M.D., C.M., F.T.M.C. Toronto, M.R.C.S. Eng., L.R.C.P. Lond.: Demonstrator in Clinical Medicine and in Pathology, University of Toronto; Assistant Physician to St Michael's Hospital, Toronto; Physician to Toronto Hospital for Incurables. With 6 plates and 49 other illustrations. Philadelphia: P. Blakiston's Son & Co.

Canadian medical literature being all too scant, gives interest to anything produced in this line from one of our own men. An examination of the text, arrangement of subjects, illustrations, etc., leads us to congratulate Dr. O'Reilly that he undertook to prepare a book of this character. It is brimful of practical "pointers," and will be found of splendid worth to medical students. It is concise and right up-to-date. The arrangement is all that could be desired. Designed in the interests of medical students, it cannot fail to meet with the best favor from them. Indeed, we believe that many general practitioners will find it of extreme value as a ready hand-book to rapidly make a review of their physical diagnosis, especially as it contains all the newer matter in this branch of medicine.

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M.D., Surgeon to the North Chicago Hospital, Chicago, Ill. With an introduction by Carl Beck, M.D., and a chapter on the application of bismuth paste in the treatment of chronic suppurations of the nasal accessory sinuses and the ear by Joseph C. Beck, M.D. Published by C. V. Mosby Company of St. Louis. Price, $2.50.

The book contains a history of the discovery of the therapeutic value of bismuth paste and a detailed account of its use. The paste is of value in all chronic suppurations where there are sinuses or fistulae, except where there are fistulae of the gall bladder, pancreas, or where the sinus communicates with the cranium.

The chapter on bismuth paste in anatomical diagnosis and that on the diagnostic errors which have been revealed by the use of the paste are very instructive. There are chapters devoted to the use of the paste in sinuses due to spondylitis, osteomyelitis and joint diseases, post-operative abdominal and kidney sinuses, rectal and fecal fistulae, empyema and lung abscess.

An interesting chapter is devoted to the conservative treatment

of cold abscess, and another to the limitations of the use of the paste and the causes of failure in some cases.

The last two chapters are devoted to the use of bismuth paste in chronic suppurations of the nose, ear, accessory sinuses and mastoid process, and to the use of bismuth paste in dentistry.

There are 81 illustrations. The book is well written and the meaning is always clearly understood. It contains 237 pages, and there are many references. W. A. S.

A Text-Book of Bacteriology. By Philip Hanson Hiss, M.D., Professor of Bacteriology, College of Physicians and Surgeons, Columbia University, N. Y., and Hans Zinsser, M.D., Associate Professor of Bacteriology, Leland Stanford Jr. University. Illustrated. 745 pages. 1910. $3.75. New York: D. Appleton & Co.

In this text-book the authors present a treatise on general bacteriological technique and medical bacteriology. The authors are so well known to the students of this subject, through their many contributions to it, that the book should be widely read.

In section one bacteriological technique is well presented and illustrated. Section two is devoted entirely to infection and immunity. In it they discuss the many phases of these subjects in such a way that the fundamental principles should be easily grasped by the student. The most recent investigations are incorporated in this discussion. The chapters devoted to the study of the pathogenic bacteria are well written and concise. The arrangement of the subjects treated is especially good.

This text-book of bacteriology for the student and the practitioner of medicine, easily ranks with the best that have appeared up to this time. O. R. M.

Differential Diagnosis. Presented Through An Analysis of 383 Cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 753 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1911. Cloth, $5.50 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

The plan followed in the arrangement of this book follows out the course of procedure often adopted in examinations of patients, either in the office, at the bedside or in the hospital clinic. First,

there are some general considerations. Then follow reports of cases, the symptoms being carefully set out and thus leading up to the diagnosis. In the table of contents one sees that the author has selected sixteen symptoms often complained of by patients, and within these limits the diagnoses are established.

But the object of the book is not merely to gather together all the symptoms in a given case, but rather from the point of view of practice to collate these to so arrive at the underlying disease, and not merely to treat symptoms. The discussions which are connected with each printed case are concerned with differential diagnosis, and in this will be found the chief value of the book. The profession will find it very interestingly arranged, aptly illustrated and exceedingly instructive.

Collected Papers. By the Staff of St. Mary's Hospital, Mayo Clinic, Rochester, Minnesota, 1905-1909. Octavo of 668 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1911. Cloth, $5.50 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

This is a considerable volume of 668 pages. Of these, the first 294 pages deal with various conditions and operations on the alimentary canal. There are five papers on hernias, seven on genito-urinary organs, eleven on the ductless glands, four on head and extremities, one on anesthetics, three on technic, five general papers. Many of these papers have been read before some of the most prominent medical societies, and have appeared from time to time in various medical journals.

The medical profession will appreciate this collection of papers from the world famous clinic of Rochester, Minn., and that the original intention to confine the volume to private circulation was abandoned and the book placed upon the market so that any and all could have the opportunity to possess it.

Catechism Series—Gynecology. Edinburgh: E. and S. Livingstone.

This is another of those tutorial note-books, of which short but commendatory notices have appeared in our pages. They are gotten up specially for students for ready and rapid review of the salient features just prior to examination.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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Gynecology: F. W. Marlow, W. B Hendry.
Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.
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GEORGE ELLIOTT, MANAGING EDITOR

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COMMENT FROM MONTH TO MONTH.

The report of the Royal Commission on Tuberculosis for the Province of Quebec has been laid before the Legislature of that Province. It is signed by such well-known medical men as J. George Adami, T. G. Roddick, E. P. Lachapelle, J. J. Guerin, Jos. E. Dubé, Michael J. Ahern and others.

The following are the recommendations:

1. More rigorous application of laws contained in the statutes regarding tuberculosis.

2. Elementary instruction in hygiene in the primary schools, normal schools and other houses of education.

3. Popular instruction under the direction of the Board of Health.

4. Medical inspection of schools, shops and factories.

5. The establishment and maintenance of anti-tuberculosis dispensaries in the principal centres of the Province.

6. Isolation of advanced cases among the poor.

7. Establishment of open-air schools for weak children who are prone to tuberculosis.

8. Treatment of curable cases by the "class" method, as it has been demonstrated that this is a method of treatment almost equal in results to sanatoriums and much more economical, giving to the patients, besides, the opportunity of living with their family. This

kind of treatment is acceptable to the poor people, and the sanatorium method to people of a richer class.

9. Legislation to prohibit the premature employment of children.

10. Investigation and legislation regarding the hours of labor of adults in factories.

11. Legislation against alcoholism.

12. Meat inspection and the control and sale of milk.

These are the measures for immediate action.

For gradual execution the following are recommended:

1. The establishment of preventoriums.

2. The erection of sanatoriums.

3. Agricultural and vacation schools.

4. Improved condition of dwelling houses, and legislation to insist upon the construction of sanitary dwellings at reasonable rents for the working classes.

5. Legislation for improved hygienic conditions in the cities and districts of the Province.

The Commission further submitted for the attention of the Legislature: That the Provincial Board of Health shall be the central authority for the direction and application of measures in the fight against tuberculosis, and for this end a money appropriation should be voted sufficient to create a special tuberculosis department with the necessary working staff. This department should be directed by a competent medical man, who will carry out all the educational means mentioned in the report, inspect the anti-tuberculosis institutions, and try to organize others to complete the anti-tuberculosis armament; compile statistics, and present an annual report on his administration and the results of the anti-tuberculosis campaign.

That in each municipality or association of municipalities where there is an anti-tuberculosis association or society, established by charter, the Government on the favorable report of the Provincial Board of Health, shall contribute a certain fixed sum to the cost and upkeep of any dispensary, and give power to the municipalities served by this dispensary to contribute equally to its construction and upkeep.

That the Government take the necessary measures to assure the medical inspection of schools, the inspectors reporting not only to their municipalities, but also to the Provincial Board of Health, on the health of the scholars, the cubic space accorded to each, the ventilation and sanitary state of schools; and, moreover, that the Provincial Board of Health be provided with power to inspect all

the schools of the Province, and to impose such changes as it deems necessary to render the schools healthy.

That the Government name duly qualified inspectors to report on the sanitary state of all industrial establishments where collective work is done, such as industry, commerce, administration, and that the existing legislation, to be augmented, if necessary, be applied to assure the cleanliness of the establishments where work is done collectively.

The temperance people state the Province of Quebec is ahead of Ontario in the matter of temperance reforms. This shows they are ahead also in the matter of fighting tuberculosis and are setting a fine example for all other Provinces in the Dominion to pattern after and emulate.

The Report on Medical Education in Canada and the United States prepared and distributed by the Carnegie Foundation, met with a great deal of adverse criticism from many quarters. Mr. Pritchett, the president of the Foundation, in the *J. A. M. A.*, Feb. 25th, 1911, tells us that it has been criticized one way and another by nearly all medical journals, institutions and associations. As the report compared regular schools with irregular, quack institutions, and schools which are not medical schools at all, stating that one in Canada was even as bad as anything in the United States. Dr. Pritchett's words in connection with osteopathic schools may even at this date prove interesting enough to here set them out in full:

"It is interesting to see with what success some medical sects, for example, the osteopaths, have learned from the history of medical education to *ignore the claims of the public in their own interest. A brief and meagre* education is justified on the ground that the '*science*' is not as yet so comprehensive as '*regular medicine*' in its scope: but the osteopath, once graduated, is *very vague* as to just what he should or should not attempt to relieve by osteopathic methods; in consequence he will at least *try to cure everything!* The dean of an osteopathic school in California admitted that his students are taught to treat even such affections as gonorrhea and syphilis by 'osteopathic' methods. In a number of States the osteopaths are thus conducting schools which, while nominally osteopathic establishments, are really, by the aid of *feeble departments of anatomy, pathology and physiology*, turned into the *weakest of ordinary medical schools.* On the plea that they are training a physician of limited range, they get from the State a concession

enabling them to give the degree of D. O. in three years, instead of four; the graduates, though so *poorly trained* that under any other name they would not be admitted to practise at all, at once spread themselves over the *entire field of illness, disease and accident.* But in carrying out this programme the osteopaths have done nothing other than imitate the example of the weak medical school which goes on furnishing to those who attend it a form of education enormously behind the requirements of our day and time, while giving to the public the impression that it is offering facilities of an adequate and satisfactory sort." (In every case the italics are ours.—Ed.)

Surely the Carnegie Foundation, or at least its president, has erred again. Surely medical schools which are teaching all the branches of a medical education, scientific and practical, and sending forth capable and competent men, even the weakest medical school in the Carnegie Foundation list of the ordinary class—surely it cannot be put in the same category with any so-called medical institution—save the mark—which only has feeble departments of anatomy, pathology and physiology. It is nothing but insulting, after this enlightenment (?) on osteopathic teaching, to state that one of our medical schools was as bad as anything in the United States. And we doubt very much if there is even one ordinary medical school in the latter country which maintains only feeble departments of anatomy, pathology and physiology.

Fads, however, will arise and pass away. Osteopaths may for a time flourish like a green bay "horse." The latest to appear in our midst is the chiropractic—a system of so-called treatment of disease by manipulations of the spinal column, a sort of higher-caste osteopathy. The elite dearly love fads. Schools of chiropractics must be treated of in the next issue of "Medical Education in the United States and Canada."

News Items

Dr. J. B. Freeman, Bridgetown, N.S., died February 27th, 1911.

Dr. R. P. Nicholls, St. John, N.B., died in Bermuda March 6th, 1911.

Dr. Edmund Robillard, Montreal, died January 13th, 1911. He was in his 86th year.

Dr. Elizabeth M. Henderson, Hamilton, Ont., died suddenly in that city on the 26th of March.

Dr. Gideon Barnaby died in Digby, N.S., the 10th of January, 1911. He graduated from Harvard in 1871.

Dr. R. P. McKenzie, Rossland B.C., died January 16th, 1911. He was born in 1875 and graduated from McGill University in 1904.

Dr. J. H. Armitage, Waterloo, Ont., died the 18th of January, 1911. Deceased was born in 1860 and was graduated from McGill University in 1886.

Quarantine in New Brunswick towns is checking the spread of smallpox in that province. The disease has existed in nearly all the lumber camps of the Miramichi district.

Dr. Wm. I. Bradley, Ottawa, died in the Royal Victoria Hospital, Montreal, March 23rd. He was a graduate in Arts of the University of Toronto 1884, and in Medicine of McGill in 1888.

Owing to the difficulty in getting municipalities in Quebec to report cases of smallpox, the Quebec Board of Health will give no information of new cases to the public. The disease is epidemic on the north shore of the St. Lawrence below the Saguenay, and there are some cases in the vicinity of Montreal.

Dr. Charles M. Stewart, Toronto, was instantly killed by being thrown from his horse in front of a Metropolitan car on Yonge St., Saturday the 25th of March. The late Dr. Stewart was a graduate of Trinity Medical College of the class of 1897, and also M.R.C.S. and L.R.C.P., London. He had practiced in Toronto three or four years, confining his work to nose, throat and ear diseases. He was 38 years of age.

Dr. Geo. H. Field, Cobourg, Ont., is visiting in the West Indies.

Dr. John Caven, Toronto, has been spending the winter in Florida.

Dr. George R. McDonagh, Toronto, will arrive home early in April from Barbadoes.

The Shipmaster's Association in Vancouver, B.C., are agitating for a seaman's hospital.

Dr. R. Tait McKenzie, Philadelphia, was the guest of honor at the annual medical dinner of McGill.

Dr. J. M. P. Chalmers, Vancouver, B.C., has returned from a four months' trip in eastern Canada and United States.

The citizens of Portage la Prairie, Man., will erect a drinking fountain as a memorial to the late Dr. Frank B. Lundy of that city.

The number of patients treated in the Vancouver General Hospital in 1910 was 4,184, as against 3,042 in 1909. The percentage of deaths was 5.87.

At the annual dinner of the Societe Medicale de Montreal, Sir Lomer Gouin, the Premier of Quebec, announced that Quebec would be divided into ten sanitary districts, under the control of the Provincial Board of Health.

The late Mr. Charles Byrd, Montreal, left $10,000 to the Montreal General Hospital, $5,000 to the Protestant Hospital for the Insane at Verdun, $2,500 to the Western Hospital and $2,000 to the Alexandra Hospital.

Alexander Hospital, Montreal, treated 820 patients during 1910, 165 over the previous year. The deaths numbered 47, the lowest in the history of the institution. There were 233 cases of scarlet fever, 227 diphtheria and 210 measles.

According to the amendment to the Canada Medical Act now before the Canadian Parliament, British Columbia, Saskatchewan and Alberta, having no universities teaching medicine, two of the three members of the Council the Government is to name will be taken from these provinces.

The British Columbia Pharmaceutical Association has taken the initial step of any similar society in America to stop the sale of morphine, cocaine, liquor and medicines containing the same, without the order of a physician.

Dr. Wilfred T. Grenfell, of Labrador, has arrived in New York on his annual lecturing tour in Canada and the United States.

Ontario Medical Association.—Remember the dates and place of the annual meeting this year, Niagara Falls, Ontario, May 30th to June 1st. Do more than remember! Go.

Reciprocity.—One of our United States exchanges urges a rather queer argument for reciprocity: "It means cheap pulp, cheap paper, cheap books, cheap journals, and, then, we preserve our own forests."

Report from the Canal Zone.—The report of Dr. W. C. Gorgas, Chief Sanitary Officer of health conditions in the Canal Zone during the year 1910 has been issued. Summarized it shows that the improvement in general conditions apparent most markedly in 1909 has continued, although the total death rate was slightly increased because of an increase in the number of deaths from violence. A comparison of the deaths and death rates during the last seven years shows the following:

	Number of employes.	Deaths.	Rate.
1904	6,213	82	13.26
1905	16,512	427	25.86
1906	26,547	1,105	41.73
1907	39,238	1,131	28.74
1908	43,891	571	13.01
1909	47,167	502	10.64
1910	50,802	558	10.98

The death rate from disease alone was lower in 1910 than in 1909. Among white employes from the United States the death rate from disease was 2.63 per thousand, and among all Americans, including women and children, 3.64 per thousand, which is a decided improvement over 1909. Deaths from special diseases among all employes are classified as follows:

	Number of Deaths.	
	1909.	1910.
Typhoid Fever	13	13
Dysentery	8	21
Pneumonia	70	73
Malaria	52	50

The death rate of the total population, including the cities of Panama and Colon and the Canal Zone, was 21.18, an increase over

the previous year, when the rate was 18.19 per thousand. One death from yellow fever occurred during the year, the patient having arrived in Panama from Cartagena only two days before he was taken ill. With this exception no cases of yellow fever, plague, or smallpox occurred on the Isthmus during the entire year.—*Med. Rec.*

The New York Polyclinic Medical School and Hospital gave a dinner at the Waldorf on March 11, at which plans for the new buildings now in course of construction were discussed. Dr. Robert C. Myles spoke of the new enterprise. Among the other speakers were Dr. John A. Wyeth, Dr. J. Riddle Goffe and Dr. Francis J. Quinlan.

Medical Inspection in Vancouver Schools.—The physical peculiarities and history in sickness and health of the whole of the eleven thousand children who attend the city schools is now known to the medical officer of the board.

During the present smallpox alarm for instance, he is aware what children have had the dread disease before and as those who have been previously afflicted are especially liable, the authorities can afford them greater protection. He knows what children are deficient in eyesight or in any other essential respect. The present weight and height of every pupil is known, and next year it will be possible to discover what physical progress the little men and women have made during the twelve months with the same degree of accuracy that the examinations make it possible for teachers to discern their mental growth.

An ingenious system of cards has rendered all this feasible.

Dr. Brydone-Jack this January introduced two kinds of cards. On one the parents record if the child has had any of the leading diseases or if there is any hereditary sickness, such as tuberculosis in the family. On the other is inscribed the result of the very thorough physical examination that the child undergoes on starting the term.

If it is found that the young scholar is suffering from some affection that treatment will arrest, Miss Breeze, the nurse, is dispatched to the home to persuade the parents to take the necessary steps to save more serious results.

Weigh scales have been ordered for all the schools, and the moment they arrive they will be installed. This will enable the principals to keep a very close tab on the development of their young proteges. In Great Britain and in some parts of the United States the physical side of the education of the children is now

very closely watched, as it is recognized that much can be done to improve the efficiency of the race. The system which has been in progress in Vancouver for a little over a month, is the result of Dr. Brydone-Jack's study of procedures in vogue in all the principal cities of the world.

The physical examination saves the young man who has a weak heart from indulging in athletic sports which will inevitably lead to a sudden tragic end if he is not warned in time.

The young scholar with weak eyes—and fifteen per cent. of the children in the local schools have trouble of some sort with their organs of sight—are warned in time and often saved from total blindness. It also places on record the children who are not vaccinated, which at a time like this is information of the utmost importance. Over fifty per cent. of the children of the city are at present unvaccinated. Medical inspection was introduced into the schools of Boston sixteen years ago, and in Great Britain in 1907. The methods now under the control of the state in the United Kingdom are regarded by medical authorities as equal to anything in the world, and it is largely upon this system that the Vancouver school scheme has been modelled.

Beginning with the partial services of a medical man in 1907, the system has developed into the present comprehensive scheme, which enables the captains of health, who in this case are Dr. Brydone-Jack and his able assistant, Miss Breeze, to fight disease in a way that has never been attempted in this province before.

Dr. Fagan, the Secretary of the Provincial Board of Health, last year made a tour of many of the principal cities of the United States and the east, and as the result of what he saw the physical examination of pupils was made compulsory all over the province. The system in vogue in Vancouver is the same as that prevailing in the province, except that the city cards enable more details to be given.

The Medical Faculty of McGill begs to announce that an extended course of study for Graduate Students will be given during the coming summer. Beginning on Monday, June 12th, the course will be continued for a period of six weeks, during the first half of which the work will be conducted in the Montreal General and during the second half in the Royal Victoria Hospital.

In the Montreal General Hospital the following courses have been arranged for the first three weeks:

Medicine.—Ward rounds, twice weekly, by Dr. C. A. Peters Two classes weekly in the Methods of Physical Diagnosis; this will include demonstrations in treatment, by Dr. A. H. Gordon. One

demonstration weekly in Clinical Laboratory Methods, by Dr. A. G. Nicholls. One Out-Patient Clinic weekly, by Dr. ——.

Surgery.—One Operative Clinic and one Ward Clinic weekly, by Dr. J. M. Elder. One Operative and one Ward Clinic weekly, by Dr. K. Cameron. Two Out-Patient Clinics weekly, by Dr. E. M. von Eberts.

Operative Surgery.—Dr. von Eberts will also devote one period weekly to practical instruction in Operative Surgery, with special reference to the technique of abdominal operations.

Obstetrics.—Two demonstrations weekly in Clinical Obstetrics in the wards of the Montreal Maternity Hospital, by Dr. H. M. Little.

Gynecology.—One Operative Clinic weekly, by Dr. F. A. L. Lockhart. One Out-Patient Clinic weekly, by Dr. H. M. Little.

Ophthalmology.—One Out-Patient Clinic weekly, by Dr. Geo. Mathewson. One Out-Patient Clinic weekly, including bacteriology of the eye, by Dr. Hanford McKee.

Laryngology.—One Out-Patient Clinic weekly, by Dr. H. D. Hamilton.

Orthopedics.—One Out-Patient Clinic weekly, by Dr. MacKenzie Forbes.

Diseases of Children.—One Out-Patient Clinic weekly, by Dr. G. G. Campbell.

Neurology.—One Out-Patient Clinic weekly, by Dr. D. A. Shirres.

Dermatology.—One Out-Patient Clinic weekly, by Dr. F. J. Shepherd and Dr. G. G. Campbell.

Genito-Urinary Diseases.—One Out-Patient Clinic weekly, by Dr. R. P. Campbell. Dr. Campbell will also give one demonstration weekly on the use of the Cystoscope.

Morbid Anatomy.—Two demonstrations weekly, on Post-Mortem Work, by Dr. L. J. Rhea. In conjunction with one of the clinicians Dr. Rhea will lay special emphasis upon the comparison of the clinical with the post-mortem findings.

For the second period of three weeks the following courses have been arranged at the Royal Victoria Hospital, each of these courses extending throughout the entire period.

Medicine.—Ward rounds twice weekly, by Dr. John McCrae. Dr. McCrae will also give one demonstration in the Alexandra Hospital for Infectious Diseases. Two classes weekly in Methods of Physical Diagnosis, by Dr. H. B. Cushing. One demonstration weekly on Clinical Laboratory Methods, by Dr. J. C. Meakins. One demonstration weekly on bedside treatment, by Dr. J. C. Meakins.

Surgery.—An Operative Clinic twice weekly, by Dr. James Bell. Ward rounds twice weekly and one Out-Patient Clinic weekly, by Dr. E. W. Archibald. Ward rounds twice weekly and one Out-Patient Clinic weekly, by Dr. C. B. Keenan.

Operations on the Cadaver.—A course of practical instruction in Operations on the Cadaver, six periods, by Dr. A. E. Garrow.

Obstetrics.—A course of two demonstrations weekly in Clinical Obstetrics, in the Montreal Maternity Hospital during the first and third weeks, by Dr. H. M. Little.

Gynecology.—One Theatre Clinic weekly throughout the entire period, by Dr. Wm. Gardner. One Clinic weekly on Minor Gynecological Operations, by Dr. W. W. Chipman. One Out-Patient Clinic weekly, including demonstrations in the use of the Cystoscope in the Female, by Dr. J. R. Goodall.

Oto-Laryngology.—Two practical demonstrations weekly for two weeks, in Intubation, Simple Mastoid Operations, Bronchoscopy and Oesophagoscopy, by Dr. H. S. Birkett. One Clinic weekly on Treatment of Diseases of the Nose, Ear and Throat, with practical instruction in the use of the Laryngoscope, Rhinoscope and Auriscope, by Dr. W. H. Jamieson.

Ophthalmology.—One Clinic weekly on External Diseases of the Eye, by Dr. W. G. M. Byers. One demonstration weekly on the Routine Examination of the Eye, by Dr. F. T. Tooke.

Diseases of Children.—One Clinic weekly, by Dr. F. M. Fry.

Orthopedics.—One Clinic weekly, by Dr. W. G. Turner, assisted by Drs. Patterson and Scrimger.

Neurology.—One Clinic weekly, by Dr. C. K. Russel.

Dermatology.—One Out-Patient Clinic weekly, by Dr. P. Burnett.

Genito-Urinary Diseases.—One Out-Patient Clinic weekly, by Dr. Wm. Hutchinson. Dr. Hutchinson will give one demonstration weekly on the use of the Cystoscope.

Morbid Anatomy.—Two demonstrations weekly on Post-Mortem Work, by Dr. Gruner.

The post graduate course is open to graduates of medical schools in good standing.

Intending candidates must first register with the Registrar of the Medical Faculty.

The fee for the course, including registration, is $50, payable in advance at the office of the Bursar of the University.

Receipts for fees paid must in all cases be shown to the Superintendent on the occasion of the first demonstration in either hospital.

Further information concerning the Course will be furnished by J. W. Scane, M.D., Registrar Medical Faculty, McGill University.

Correspondence

Toronto, March 1st, 1911.

Gentlemen,—A Public Health Exhibit, under the auspices of the Provincial Board of Health of Ontario, will be a feature of the Canadian National Exhibition, to be held in the city of Toronto for two weeks beginning Saturday, August 26th of this year. This exhibit will consist of public health equipment of every kind, and will include also a varied assortment of apparatus, etc., relating to prevention of disease.

In addition, a lecture room is being provided, where lectures, demonstrations, etc., will be given daily. Interest in these lectures will be greatly enhanced by the use of an excellent reflectoscope and several hundred lantern slides.

Firms wishing to contribute to the exhibit are reminded that shipment should be made so that exhibits will reach here *not later than August 20.* Packages should be marked with the name of the firm and nature of the manufactures, and bear the following address: Dr. John W. S. McCullough, Educational Building, Canadian National Exhibition, Toronto, Canada.

When articles to be exhibited are not of home manufacture, it will be necessary for the exhibitor to ship such articles in bond. At the close of the Exhibition, if not exported, the goods may be sold and the duty then paid.

There will be no charge for space, etc. Intending exhibitors desiring further information will please communicate with

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Toronto, Canada.

Dominion Medical Monthly

And Ontario Medical Journal

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Original Articles

REPORT OF AN UNUSUAL COMPLICATION OF SMALL OVARIAN CYSTS.

By James F. W. Ross, M.D.,
Professor of Gynecology, University of Toronto;
AND
Arthur C. Hendrick, M.A., M.B.,
Demonstrator in Gynecology, University of Toronto.

The case to be reported was admitted to the Gynecological Department of Toronto General Hospital on February 20, 1911, complaining of pain across the lower abdomen, especially on the left side, and inside of left leg, and of great swelling of the left leg.

Personal History.—Mrs. E. C., aet. 41 years, married for 19 years. No children; no miscarriages.

Menstruation began at 12 years and ceased at 40 years; regular up to one year ago; interval normal, amount and duration normal until this last year. In November and December, 1910, there were no periods, but patient says she lost a little blood in January and February, 1911, but no discharge and no urinary symptoms.

Present Illness.—Patient was taken ill the first week in January. Says she was completely run down. Her physician treated her for anæmia. Was confined to her bed for five weeks. When patient got up she could hardly walk, and had much pain across the lower abdomen. Patient then noticed her left leg was commencing to swell. This swelling continued to increase; and her physician, in making a pelvic examination considered she should be sent to the Hospital, and she was accordingly admitted on February 20, 1911.

Examination in the hospital showed the left leg enormously congested and almost one-third larger than the right. The swelling extended from the toes right up to the groin. The condition seemed one of venous obstruction rather than lymphatic. There was also an absence of inflammatory reaction, such as one might expect in phlebitis or phlegmasia.

The question was: what was causing the venous obstruction? Now, in a patient aet. 41, with unilateral œdema of a leg, one always thinks of malignant disease in the pelvis causing obstruction by metostatic growths in the lymphatics causing pressure upon the iliac veins.

Bi-manual examination did not reveal any malignant growth of the uterus, but did reveal a tense, slightly fluctuating mass to the left of the uterus and well down in the pelvis. It was diagnosed as an incarcerated ovarian cyst and abdominal section was performed.

Operation.—The usual median, sub-umbilical incision. Here the great size of the superficial and the deep veins was remarked, and bleeding was so great from them that they required ligaturing. This enlargement was due to the established collateral circulation, much as one sees in hepatic cirrhosis. On putting the patient into the Trendelenburg posture and packing back the intestines, a tumor about the size of a large orange was revealed to the left of the uterus and lying deep in the pelvis. It was a sub-ligamentous ovarian cyst, tightly bound down to the rectum and latent pelvic wall by rather dense adhesions.

These adhesions held the tumor tightly against the lateral wall and so compressed the iliac veins, both internal and external, that action was much like a ball-valve or a Sprengel's air-pump.

The tumor was freed from its adhesions, being peeled up from within, keeping close to the uterus, and from below, keeping well away from the dilated pelvic veins.

The tumor proved to be a sub-ligamentous, unilocular ovarian cyst, containing a clear fluid, and being about 3 inches in diameter.

The usual ovariotomy was performed, the cyst was removed without rupture, and the abdomen closed, and the patient returned to the ward and kept very quiet, as there was some fear of embolism after freeing the pressure upon the veins. However, the patient made an uninterrupted recovery. The swelling in the leg gradually subsided, and at the end of two weeks was normal in size, though the patient was kept quietly in bed for another week and then allowed to go about the ward.

The chief interest in this case seems to me to be the symptom of swelling of one leg.

For an ovarian cyst about the size of an orange to cause so much obstruction from its presence in the pelvis seems unusual, especially when one remembers how fluctuating a cyst of that size usually is.

The explanation is purely mechanical, and the symptoms were due to the cyst being bound down in a most unusual manner by adhesions to the wall of the true pelvis.

The literature shows only a few cases of ovarian cysts causing the complication described above.

A SKIN ERUPTION IN SIX CONSECUTIVE CASES OF POLIOMYELITIS.*

By Dr. Alan G. Brown,

Sick Children's Hospital, Toronto.

This skin eruption which I am about to describe appeared in six consecutive cases in the H. S. C. during a period of one and a half weeks, and has followed the same course in each case. The cause and distribution and whether or not it is associated with the paralysis yet remains to be ascertained. In reviewing the different works on poliomyelitis, there appears to be no reference to such a lesion, but in looking over the New York report of 1907 of the epidemic there I find they have tabulated, but not fully described, different varieties of skin eruptions, as follows:

Erythema, 7; macular, 8; maculo papular, 3; papular, 18; pustular, 3; urticarial, 2; sudamina, 8; herpes, 2; petechial, 2; vesicular, 6.

The form of eruption which was most common in this epidemic was papular, and it was particularly mentioned in many instances that the eruption covered the entire body. In concluding, the article says: "Perhaps this eruption may have some significance, since it is not apt to be mistaken for anything else."

The character of the rash was fairly uniform, and the distribution seems to vary little. In all cases it appears as a small papule, quite shot-like in character, with a tiny inflammatory base. This may or may not go on to vesiculation. If it does, the vesicle is about the size of a pinhead, and looks not unlike a small chicken

*With the Consent of Drs. Baines and Machell and assistance of Dr. Goldie, I am permitted to make this report.

pock, containing a clear fluid. The vesicle also is quite hard, and those papules which terminate in a vesicle lose their inflammatory base. The rash may appear in all stages on the same patient; for example, in one area vesiculation may be present, while in another simply a papule; and then again, a small impalpable pigmented spot. The distribution is as yet indefinite, but in all cases they appear to be present and most abundant on the paralyzed limbs, and then again they seem to be scattered, but only sparsely, over the unaffected abdomen and chest, and occasionally on an unaffected upper extremity. They do not appear to follow any definite nerve segments, nor are they in the least painful to the touch.

Case 1.—The rash was present when the child was admitted, and the disease was then of four days' duration, and as far as could be noticed there was no further development of the vesicles. The temperature never rose above 99°, and fell the fourth day; and on the fifteenth day after admission the lesion had entirely disappeared. It was present on the outer side of the right and left leg, and on the external part of the dorsum of both feet, but more abundant on the right side.

Left leg completely paralyzed. Right leg had slight movement in every direction.

Case 2.—This patient's illness was of two days' duration, and when admitted the rash was easily discernible, but did not appear on any fresh areas, and could not be seen on the 18th day after admission. The temperature fell to normal on the second day, and never rose above 99°, except four days later, when it went to 101, then fell. This lesion showed a symmetrical distribution, viz., on the anterior and posterior surfaces of the right and left leg, and one or two on the dorsum of the feet; throughout, the rash was very feeble. Left leg was completely paralyzed. Right leg showed fair movement, but the reflexes were gone.

Case 3.—In this case, also, the disease had been present four days previous to admission, and at this stage presented the skin eruption, which did not show any further development. The temperature fell to normal on the third day, and never rose above 99°, but during the following weeks there was an occasional rise of temperature, attributed to intestinal disturbance. The rash showed typically and disappeared about the end of the second week after admission, being profuse over the dorsum of the right foot, tibial and calf surface. The right leg was completely paralyzed, the left leg feeble. Scattered papules were present over the trunk, while the rash also appeared on the right elbow and on the posterior

surface of the forearm. Only a discrete papule existed on the posterior surface of the left arm. Power in both arms quite normal.

Case 4.—On admission had been ill five days, and the rash was present from the beginning, and faded at the end of two weeks after admission. This case ran almost a continuous temperature p.m. remissions. The lesion was present only in the form of an occasional papule and vesicle on the calf and sole of the right foot. Right leg paralyzed. Left leg moved slightly, but reflexes gone.

Case 5.—Had also been ill five days previous to admission, with a rather pronounced rash, which did not appear to form in fresh places, and was entirely gone at the end of three weeks and a few days. The temperature on admission rose to 101°, but fell to normal on the 6th day, and in four days again rose to the same height, and likewise fell on about the 7th day, and from this on ran a rather irregular course. The rash was present on the anterior and posterior surfaces of both legs, chest, abdomen, and an occasional one on the upper extremities, but did not seem to be present more on one place than the other. Both upper extremities paralyzed and lower reflexes gone. Throughout the child showed mild brain symptoms.

Case 6.—Was ill six days before admission, and showed the rash from the first, disappearing at the end of the third week, not developing any more after patient's admission to the hospital. This temperature was also very irregular, with a.m. and p.m. remissions, not rising above 99°, and even up to date the temperature is not normal continuously. The rash was typical, being present more or less all over the body, papular and vesicular, more especially on the lower extremities, anterior and posterior surfaces, and on the dorsum of both feet, over the trunk and chest, and only an occasional one on the arms. Both lower extremities paralyzed, while the upper seem normal.

The lumbar punctures, smears and cultures from the serum of the vesicles have shown no uniform results, while sections through the vesicles show the latter not to be deep-seated, as one would imagine on palpating them, but on the contrary to be only superficial, *i.e.*, between the malpighian and corneous layers of the skin; and apart from a little peri-vascular infiltration there was no other pathological change to be found.

SALVARSAN (EHRLICH-HATA'S "606"; DIOXY-PARA-DIAMIDO-ARSENO-BENZOL.)

By Graham Chambers, B.A., M.B.

(Continued from February Number.)

Flexner and Fordyce, of New York, advocate the use of an alkaline solution injected intra-muscularly; but in dissolving the drug do not use as much caustic soda as required in preparing the drug for the intra-venous injection. This seems a rational procedure inasmuch as the greater the amount of alkali used the more intense the local reaction. It may be asked, How is it possible to form an alkaline solution for a subcutaneous or intra-muscular injection with less alkali than that required for an intra-venous injection? The answer is: that the greater the dilution, the more alkali required. For instance, 6 gram. of salvarsan in 250 c.c. of water require about 21 drops of a 15 per cent. solution of caustic soda, but the same amount of drug dissolved in 10 c.c. of water requires much less.

The Reaction.

The reaction produced by the administration of "606" may appear immediately. After a subcutaneous or intra-muscular injection pain appears at once, and in a few minutes swelling and induration are manifest. The intra-venous method does not cause any pain or swelling. These are the first symptoms and signs of the reaction. A little later, other symptoms and signs may appear, such as chill, fever, leucocytosis, vomiting, intestinal irritation, tenesmus, and loss of patellar reflexes. A chill occurred in three of my cases; fever and leucocytosis in all who were under observation; and vomiting in one. The chills occurred about forty minutes after the administration of the drug by the intra-venous method. They were followed by fever, which, however, disappeared in a few hours, and did not reappear. During the fever, leucocytosis was present. As to the cause of this type of fever, it is difficult to explain. Some think it is due to endotoxins liberated by the death and solution of the spirochætes. This may be true, but I have seen a similar chill and fever follow an intra-venous injection of normal saline. After a subcutaneous or intra-muscular injection of "606" the fever is

generally of a different kind. The temperature rises almost immediately, but as a rule the elevation is not marked. It lasts a few hours, and is followed by an apyritic interval of one or two days. Leucocytosis is usually present during the fever. Again, following the afebrile period, fever appears and may remain for several days. This "late" fever is probably due to endotoxins of the spirochætes. It should be mentioned that in a few cases a fall of temperature below normal has been observed at the time of the reaction.

The Contra-Indications and Indications.

In using "606" in the treatment of syphilis, it should be remembered that the treatment is no ordinary method of medication; and it cannot be too strongly urged that care be taken in the selection of cases. Before deciding on the treatment, a thorough examination of the patient should be made, special attention being directed to the kidneys, cardio-vascular system, central nervous system and eyes. Any grave visceral disease of non-syphilitic origin is, as a rule, a contra-indication to the use of "606," whereas, the presence of syphilis—primary, secondary or tertiary—is an indication. The following may be cited as the important contra-indications:

I. Nephritis.

II. Optic neuritis and optic atrophy.

III. Tabes dorsalis and general paresis, except in their incipiency.

IV. Advanced disease of the central nervous system.

V. In advanced myocardial disease and cardiac insufficiency.

Of course each case should be considered by itself. A contra-indication may exist with one method of administration but not with another. For instance, in the case of a patient with cardiac disease the drug may sometimes be given subcutaneously or intramuscularly when there is a contra-indication to its administration by the veins.

The Results.

Anyone using "606" in the cure of syphilis is soon convinced of the marvellous action of the drug and the brilliant results following its use. The action of mercury in syphilis is remarkable, but this is not to be compared with that which one sometimes sees after the administration of "606." This unfortunately is not always the case. In a small percentage of cases the remedy apparently fails to favorably influence the course of the disease. Again,

in some cases all the symptoms and signs disappear for a time, and then relapses occur. The percentage of relapses after a careful treatment has not been definitely determined.

The Wassermann Reaction.

This serum test occupies a very important position among the diagnostic methods used in studying syphilitic patients. In a patient recently infected the reaction may be absent, so that one should not wait for a positive reaction before instituting treatment, if one is convinced of the presence of syphilis. This negative phase does not last long, so that if the patient is untreated, the Wassermann reaction soon becomes positive, and remains so as long as the patient is actively syphilitic. Moreover, Boas, of Berlin, found in eleven cases of early and four cases of late latent syphilis which had been untreated that the Wassermann reaction was positive.

Ehrlich calls attention to the importance of watching the Wassermann reaction after the use of "606," for it is found that after a negative reaction has been obtained the blood may again become positive, which is an indication for another injection of the drug. Another type of case in which the Wassermann test is very valuable is to determine the presence or absence of active syphilis in a patient who presents none of the ordinary symptoms or signs of the disease. If such a patient has not received anti-syphilitic treatment a negative reaction practically excludes a diagnosis of syphilis. On the other hand, if the patient had been treated, a negative reaction does not determine whether or not syphilis is present.

MEMBRANOUS PERICOLITIS.

By J. P. Kennedy, M.D.
Surgeon to the Wingham General Hospital.

My attention was first vividly drawn to this condition during my annual visit to the Mayo Clinic, in July of last year, by Dr. W. J. Mayo. Dr. Jabez N. Jackson, who, I believe, was the first to describe the condition as a clinical entity (*Surgery, Gynecology and Obstetrics*, September, 1909), was visiting the clinic at the time, and gave us an address at the Surgical Club one afternoon on the pathology, symptomatology and treatment of the disease. Although I had previously read his article in *Surgery, Gynecology and Obstetrics*, his graphic description of his gradual elucidation of the symptomatology impressed itself upon my mind. For the benefit of any who may not have seen his original paper, I may quote him as follows:

"The transparent, vascularized veil appearance of the membrane strikes one's attention very forcibly, with the parallel bright red vessels, running with the long axis of the ascending colon. In some instances it appears as though the membrane came on to the colon from the lateral parietal wall just above the caecum and courses directly upward to disappear beneath the liver on the superior layer of the transverse mesocolon. In other instances it seems attached like an adhesion to the under surface of the liver wall anterior to the normal peritoneal reflection. Again in other cases it appears as though it had begun above and descended on the colon to its termination, usually just above the caecum. Again we have seen it pass across and upward to the transverse colon, which in one instance was apparently drawn down by the membrane practically paralleling the ascending colon to the level of the caecum. In this case the gastric symptoms were marked as a result of the mechanical gastroptosis thus produced. In one instance this membrane was so dense as to lose entirely its apparent vascularity and transparency, and looked like a solid sheet of organized fibrous tissue, beneath which the ascending colon was so lost that it could not be seen at all until the membrane was divided and brushed aside, when an apparently normal, though contracted, colon became evident. In no instance does this membrane resemble our ordinary conception of an adhesion. It is never adherent to

the abdominal wall, nor to any contiguous loops of small intestine. Instead it resembles more closely than anything we can describe a thin pterygium. In recent cases the membrane is quite free and produces but limited restriction to the underlying colon. In more advanced and characteristic cases it seems to bind the colon to the abdominal wall and produces such marked angulations and convolutions as to practically produce a stricture of its lumen. In fact, in one case seen in autopsy, when a stream of water was caused to flow into the caecum through the ileo-caecal valve, the caecum distended almost to bursting, and yet none of the fluid would pass through the ascending colon and past the hepatic flexure until it was milked through with the fingers. The angulation of the colon is generally most marked at the hepatic flexure. There is always a very loose space where the membrane can be easily picked up at the outer angle where it passes from the colon to the outer parietal wall."

On September 15th last I was called to see A. G., aged 20 years.

Family History.—Negative.

Personal History.—Previous illness, none, excepting mastoid disease, for which I operated on her five years ago. Complete recovery.

Present illness began last March, the first symptoms being the occasional passage of a few drops of blood in the stool. During the spring and summer she suffered at times from a dragging, drawing sensation, sometimes amounting to pain, along the right side of the abdomen. She was a stout, hearty, athletic girl, not given to complain unnecessarily, and did not consider her condition sufficiently serious to consult a physician. The first week in September she entered the training school in Victoria Hospital, London, to train as a nurse. She was there only a week when the pain became so bad that she was forced to give up the work, and her mother brought her home to Wingham.

When I called to see her I found her with a normal temperature, normal pulse, suffering severe pain along the right side of the abdomen. This pain radiated through to the loin behind; in fact she complained of about as much pain in the back as in front. The right side of the abdomen, too, was quite tender to the touch. During the next few days I found her temperature and pulse normal always. Her prominent, and in fact her only marked symptoms were pain and tenderness, which grew severer. One morning her mother remarked, "Doctor, do you think Annie has appendicitis?" I replied that she might have a chronic appendicitis, but that I was convinced that there was some further trouble in addition.

As I saw they were anxious to have something done and the indefiniteness cleared up, I had patient removed to the Hospital for operation. So certain was I that there was something further than appendicitis at the bottom of her trouble, although I did not expect to find the pericolic membrane, I opened the abdomen in the medium line. Upon opening I found the entire ascending and transverse colon covered with the bright red vascular veil described by Jackson, and beneath this cobweb, here and there, spots, tags of fat or enlarged lymph glands, as mentioned in his pathological description of the condition. At the lower part of the ascending colon, and enveloping the entire caecum and appendix this had developed into a membrane or apparent pseudo-peritoneum. I cut through this, grasped the base of the appendix, and tied it off. With a great deal of difficulty I then enucleated a very small sclerotic appendix, much as one would draw a finger out of a tight glove. I then loosened up the enveloping vascular veil, but as this was my first experience in operating on a case of this kind, and as the subsequent history of the case showed, I evidently failed to loosen up the membrane sufficiently at the time to give a permanent cure. The patient rallied nicely from the operation, wound healed in a week, and the patient left the hospital in two weeks. She was entirely free of her pain and distress for three weeks, when it began to return gradually, and on the 24th of October I had her again removed to the hospital, where she remained for four weeks. During this time we gave her rest cure, abdominal gymnastics, massage, vibratory and otherwise, anti-fermentative diet, and occasional catharsis. During this time her temperature never went higher than 99 1-5 degrees, excepting on November 13th, when for some unaccountable reason it reached 101 degrees. Most of the time, and sometimes for several successive days, temperature was normal or sub-normal.

Under this treatment pain and tenderness almost entirely disappeared, and she was allowed to go home on November 26th. She had only been home a day or two when the pain again returned with increased severity, and I had her again removed to the hospital on the 6th of December for further observation. The pain became more general, and there gradually developed exquisite tenderness all over the abdomen, more marked just to the right of the umbilicus. The whole abdomen was tender and sore as if it had been bruised by external violence. In fact, the way she expressed it herself was, she felt as if J. L., an acquaintance, and a very large, stout individual, had sat upon her abdomen, crushing and bruising everything inside.

She had for days a slight elevation of temperature, 99 degrees to 99 1-5 at 6 p.m., the remaining part of the 24 hours temperature being normal or sub-normal. She lost her appetite completely, and consequently failed in flesh The dominant symptom, however, was pain, a constant dragging, drawing, boring pain, almost altogether on the right side, but tenderness all over the abdomen on pressure.

She was brave and did not complain without good reason, but the pain became so severe that we had to resort to morphine hypodermically to give her rest at all. She now insisted upon my opening the abdomen again, which I did on December 29th. Opening the abdomen through the right rectus, with the aid of my assistant, Dr. Margaret C. Calder, I made a very careful exploration of the whole abdominal cavity, but could find no abnormality, excepting the vascular veil. I found the caecum quite free where I had divided the membrane previously to remove the appendix. I now divided the membrane towards the lower part of the ascending colon, and proceeded in a leisurely and orderly manner to strip off the membrane along the whole ascending colon. A large portion of the membrane I could strip off with gauze wipes. At a few points of its attachment a little oozing of blood demanded clamping and ligaturing, but most of the vessels stopped bleeding spontaneously with a little pressure. I then removed one of the fatty tags or enlarged lymph glands for microscopical examination. After the constricting membrane had been detached completely, the oozing points controlled, I washed off with hot normal salt solution, returned the bowel to the abdomen and closed as usual. The operation had been prolonged, and the patient suffered severely from shock for 48 hours. After this, however, she rallied nicely, wound healed by primary union. There was a little tenderness along the line of incision for two or three weeks, but not more, I think, than might be expected in any abdominal wound. Patient began to recuperate two days after operation, appetite returned, began to gain in flesh, and from that day to this the patient has not known an ache or pain. She is now the picture of health.

The symptoms of this condition as enumerated by Jackson are pain, tenderness, constipation, mucous discharge from rectum, gaseous distension of abdomen, particularly in exacerbations; loss of weight and tone, gastric symptoms and neurasthenia.

My patient had never been constipated up to the time she was admitted to the hospital. This was probably due to the fact that the pericolonic membrane had not yet contracted sufficiently to constrict the colonic circuit.

When the pain became worse towards the last, however, constipation set in. Jackson refers to the article by Arbuthnot Lane, of

London, on "The Surgical Treatment of Chronic Constipation" (*Surgery, Gynecology and Obstetrics*, February, 1908). He is of the opinion that Mr. Lane is dealing with much the same condition. Mr. Lane presents the symptoms of constipation as the eminent characteristic of the disease. Jackson claims pain as the predominant feature in his cases. Mr. Lane speaks simply of "adhesions." Mr. Lane advises ileosigmoidostomy after excision of the entire colon. I can readily believe, too, that this might become necessary in long-standing cases when, after the mechanical restraint of the membrane has been removed, the muscular walls of the colon are found to be so far atrophied, by continued interference with the peristalsis, as to be unable to regain their tone. Professor Duncan McKenzie, of Chicago, made the pathological examination of the lymph gland for me, and his report is as follows:

"The peritoneal lymph gland does not show any very great disturbance, slight hyperplasia and oedema, which is the result of defective nutrition and chronic peritoneal congestion. In all probability there is some obstruction to the venous circulation in the peritoneum."

So far as I know this is the first case of the kind to be described in any Canadian medical journal.

I am of the opinion that the continued symptoms in many cases of apparent chronic appendicitis, not relieved by appendectomy, may be due to membranous pericolitis.

Von Mikulicz Disease.

William Luitz (*N.Y.S.J.M.*) states Von Mikulicz first described this affection in 1894, as a distinct and typical, well-defined, heretofore undescribed disease, although he had presented a case in 1888. There is present a characteristic and symmetrical enlargement of the lachrymal and salivary glands, chronic in character, non-painful, and not associated with any demonstrable systemic disease. The treatment employed is as follows: 1. X-ray treatment, twice weekly. 2. Inunctions of oleate of mercury. 3. Potassium iodide, 10 grains daily and increased one grain a day until 47 grains a day were taken. 4. Mercurial plasters to cheeks. 5. Intramuscular injections of salicylate of mercury. 6. Liquor potasii arsenitis 10 m., t.i.d, had to stop on account of vomiting. 7. Tinct. nucis vom. If these fail, operative interference is essential.

Reports of Societies

THE CANADIAN MEDICAL ASSOCIATION.

The Annual Meeting will be held in Montreal on June 7th, 8th and 9th. Meeting to be held in the building of the Medical Faculty of McGill University, by permission of the Dean and Faculty.

PROVISIONAL PROGRAMME.

First Day, June 7th, Wednesday.

9 a.m.—Registration, Fees, and Meeting of Executive Council.
10.30 a.m.—General Meeting.
Installation of President.
Address of welcome and response.
Report of Chairman of Committee of Arrangements.
Reading of minutes of last general session.
Report of General Secretary of last general meeting.
Election of the Association's Members to the Executive Council.
Meeting of Executive Council.
1 p.m.—Lunch in New Medical Building.
2 p.m.—Section of Medicine.
Section of Surgery.
Section of Obstetrics and Gynecology.
Section of Laboratory Workers.
Section of Ophthalmology and Oto-laryngology.
Section of Preventive Medicine.
9 p.m.—Smoker (in the Victoria Rifles Armory).

Second Day, June 8th, Thursday.

9 a.m.—Meetings of Sections.
2 p.m.—Combined Sections.
(1) President's Address.
(2) Address in Surgery, Alex. Primrose, Toronto, Ont.
(3) Paper, W. J. Mayo, Rochester, Minn.
8.30 p.m.—Address in Medicine in the Royal Victoria College. Sir James Barr, Liverpool.

Third Day, June 9th, Friday.

9 a.m.—Meetings of Sections.
2 p.m.—Sections.
3.30 p.m.—Visit to McDonald Agricultural College at Ste. Anne's.

SECTION OF SURGERY.

Papers have been promised as follows:

1. Diagnosis and Surgical Indications of Duodenal Ulcer—James Taft Pilcher, Brooklyn, New York.

2. Renal Calculus: a Consideration of the Newer Methods of Diagnosis and Operative Treatment (with lantern slides)—Paul M. Pilcher, A.M., Brooklyn, N.Y.

3. Tumors of the Bladder—Wm. Hutchinson, Montreal.

4. "606"—R. P. Campbell, Montreal.

5. Spinal Anesthesia—J. M. Elder, Montreal.

6. Paper—F. J. Shepherd, Montreal.

7. Surgical Treatment of Empyema and Abscess of the Lung—E. M. von Eberts, Montreal.

8. Paper—E. W. Archibald, Montreal.

9. Operative Myxedema in Monkeys—J. H. Halpenny, Winnipeg, Man.

10. Paper—E. MacKenzie Forbes, Montreal.

SECTION OF MEDICINE.

Papers have been promised as follows:

1. Treatment of Pulmonary Tuberculosis—J. Roddick Byers, Ste. Agathe des Monts, Que.

2. Tuberculosis—R. C. Paterson, Ste. Agathe des Monts, Que.

3. Prevention of Insanity—W. H. Hattie, Halifax, N.S.

4. Some Recent Work in the Diagnosis of Hemiplegia—Ernest Jones, Toronto, Ont.

5. Paper—D. A. Shirres, Montreal, Que.

6. Paper—C. A. Peters, Montreal, Que.

Symposium on Acute Poliomyelitis.

Conjoint session, with Section of Preventive Medicine, on Water Supply and Its Relation to Disease has beeen proposed.

OBSTETRICAL AND GYNECOLOGICAL SECTION.

Symposium—Temperature in the Puerperium.

(1) Etiology—H. M. Little.

(2) Diagnosis—E. A. E. de Cotret.
(3) Treatment.

Symposium—Uterine Displacements.
(1) Etiology and Pathology—F. A. Clelland.
(2) Symptoms and Complications—W. W. Chipman.
(3) Treatment—F. A. L. Lockhart.

Original Papers:
Common Mistakes in Gynecological Diagnosis—Wm. Gardner, Montreal.
Prolonged Pregnancy—Adam Wright, Toronto.

Paper—John Clarke, Philadelphia.
Paper—H. A. Kelly, Baltimore.
Paper—J. C. Webster, Chicago.
Tuberculosis of Urethra with Specimen—E. A. L. Lockhart, Montreal.
Advances in Obstetrics in the Last Twenty-five Years—A. Lapthorn Smith, Montreal.
Paper—H. M. Vineburg, New York.
Paper—E. S. Maynard, Burlington.
Practical Points in Abdominal and Pelvic Diagnosis—E. M. Hay, Toronto.
Sequelæ of Abortion from Gynecological Point of View—L. de L. Harwood, Montreal.
Paper—J. C. Goodall, Montreal.
Paper—F. W. Marlow, Toronto.

SECTION OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Papers have been promised as follows:
1. Glaucoma—Casey Wood, Chicago.
2. Paper—J. P. McKernon, New York.
3. Paper—W. G. M. Byers, Montreal.
4. Paper—G. H. Mathewson, Montreal.
5. (a) Possibilities of Infecting Intraocular Operations by Means of the Hair.
(b) Inefficacy of Intraocular Use of Iodoform in Tuberculous Iritis.
(c) Pathological Sections—F. T. Tooke, Montreal.
6. Paper—S. H. McKee, Montreal.
7. Living Cases—R. H. Craig, Montreal.
8. Treatment of Tinnitus Aurium—A. W. Mayberry, Toronto.
10. Paper—C. W. McCullough, Fort William.
11. Paper—H. S. Muckleston, Montreal.

SECTION OF LABORATORY WORKERS.

Announcement later.

SECTION OF PREVENTIVE MEDICINE.

Announcement later.

A large number of papers in addition to those announced in this provisional programme are expected within the next few weeks. A series of entertainments has been arranged, and a ladies' committee has been formed to look after the entertainment of the wives of members and other lady visitors.

Satisfactory arrangements have already been made for reduced rates on the various railway lines, of which more precise information will be published later. Inasmuch as the functions connected with McGill Convocation and the McGill Reunion take place on the two days preceding the meeting of the Association, it is expected that the attendance this year will break all previous records in numbers.

THERAPEUTIC TIPS

WHOOPING COUGH.

Henriquez (*N.Y.M.J.*) states his belief that, after two years of trial of compound syrup of squill and compound syrup of cocillana, it is specific. In a prescription of three drachms of the first and four ounces of the second he gives fifteen drops from one to two years; twenty-five drops from two to three years; forty from three to four years; over four years a teaspoonful; dose to be repeated every four hours.

VARICOSE VEINS.

Büdinger (*Weiner Klin Woch.*) takes cotton cloth 10 cm. wide and winds a few turns below the knee. Then he winds over this three or four turns of adhesive plaster about 4 cm. wide until the plaster forms a band 2½ inches wide. This just compresses the superficial veins and is applied with the leg elevated and blood in veins stroked back towards the trunk. When it works loose it is removed and a new one applied, generally necessary about once a week. Varicose ulcers heal rapidly below this garter.

Reviews

A Text-Book of Mental Diseases. By Eugenio Tanzi, Professor of Psychiatry in the Institute of Higher Studies of Florence. Authorized translation from the Italian by W. Ford Robertson, M.D., C.M., Pathologist to the Scottish Asylums, Edinburgh, and T. C. Mackenzie, M.D., F.R.C.P., Medical Superintendent Inverness District Asylum. New York: Rebman Company, 1123 Broadway. Cloth, $7.50.

Italian medicine is well to the front in psychiatry, and this translation, which is stated to be exceedingly well done, by competent authorities, will be found to be an exceedingly readable book. Canadians will find it replete with the best knowledge on the subject, and be charmed by the easy, graceful style of the author. Every general practitioner will find it a book of the best value.

Canadian Red Cross Society. We acknowledge receipt of a copy of the Annual Report and the Charter, By-Laws, Regulations and Rules of the Canadian Red Cross Society, from Dr. Charles R. Dickson, Toronto, the General Secretary of this Society.

Medical Guide and Monograph Series—Golden Rules of Diagnosis and Treatment of Diseases. By Henry A. Cables, B.S., M.D., Professor of Medicine and Clinical Medicine of the College of Physicians and Surgeons, St. Louis, etc., etc. Price $2.50. St. Louis: C. V. Mosby Co.

To meet urgent instances for a ready reference book on diagnosis and treatment at times when the busy practitioner's time is limited is the reason given for the production of this volume. Books of this class certainly appeal to the medical student and the untried, inexperienced practitioner, but scarcely to the well qualified man. However, they serve to fasten and clinch those salient features which always must be promptly at our beck and call.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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Pathology and Public Health: John A. Amyot, O. R. Mabee, Geo. Nasmyth.
Psychiatry: Ernest Jones, W. C. Herriman.
Ophthalmology: D. N. Maclennan, W. H. Lowry.
Rhinology, Laryngology and Otology: Geoffrey Boyd, Gilbert Royce.
Gynecology: F. W. Marlow, W. B Hendry.
Genito Urinary Surgery: T. B. Richardson, W. Warner Jones.
Anesthetics. Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR

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COMMENT FROM MONTH TO MONTH.

Dr. James Bell, one of Canada's most able and skilful medical men and surgeons, died at the Royal Victoria Hospital, Montreal, at half-past ten o'clock on the morning of the 11th of April, after a short illness.

The deceased was in his usual good health up to a week ago, when he contracted a chill. No serious development was expected, but as a precaution Dr. Bell remained at his home, 409 Dorchester Street West, where his condition remained unchanged until Monday evening last, when it was found that he was suffering from pneumonia. He was removed to the Royal Victoria Hospital and died there.

Dr. Bell is survived by his wife and one son, Stuart, 12 years of age.

The medical men of Montreal are in sorrow over the loss of one who was an honor to the profession and a warm friend to all, especially to those who had just placed their foot on the first rung of the ladder of their career.

"By his death," said Dr. G. Trenholme, who was at the bedside at the time of his death, "Canada loses her greatest master of surgery. He was a man of few words, and of sterling worth. He was a king among physicians and surgeons."

Dr. Bell was the son of John Bell, and was born in North Gower, Carleton, Ont., on October 10, 1852. He was educated in the local schools, and in 1877 graduated from McGill University, winning the Holmes gold medal. He became house surgeon of the Montreal General Hospital in the same year, and was promoted to the office of medical superintendent of that institution in 1881. In 1885 he was elected to the staff of the hospital as assistant surgeon, becoming surgeon in 1886. He was elected consulting surgeon to the General Hospital on his appointment, in 1894, as surgeon to the Royal Victoria Hospital.

Dr. Bell was appointed associate professor of clinical surgery in his Alma Mater in 1888; assistant professor of surgery and clinical surgery, in 1890, and professor of clinical surgery in 1894, from which time he was surgeon-in-chief at the Royal Victoria Hospital.

He was for some years, up to 1888, surgeon of the 6th Batt. Fusiliers, and at the outbreak of the rebellion in the North-West, in 1885, accompanied General Middleton to the scene of operations as Surgeon-Major in charge of the Field Hospital Corps, being favorably mentioned in the despatches.

He married, in 1889, Edith Mary, eldest daughter of the late J. J. Arnton, of Montreal.

Deceased was a member of the St. James Club, the Mount Royal Club and the Montreal Hunt.

He was also a prominent member of the Canadian Medical Association, having at one time served as General Secretary, and was at the time of his death, Chairman of the Finance Committee.

"Women in Medicine" is the title of a strong and well-constructed article by Dr. Maude Abbott, Montreal, in the current—April—issue of *The University Magazine*. The title, to our mind, is a little misleading. It seems to us to be more concerned with women *and* medicine.

At first blush one expects to read a great deal about women doctors, what they have done, what they are doing, and what they are going to do. Instead we read what certain ladies have done, what some historic midwives have done and what some historic and celebrated nurses have done.

For instance, Lady Mary Wortley Montagu is accredited with having introduced the practice of inoculation against smallpox into England in 1718 (1722). Was Lady Montagu a doctor of medicine? And is it much to the credit of vaccination at the present

day to state that when "the Princess of Wales and other prominent ladies of the court submitted to the operation, its success was assured"? Were the then Princess of Wales and other prominent ladies of the court doctors of medicine? It is an historical fact that whilst "Lady Montagu influenced royalty, she failed to influence her own friends, and her own nephew and the very friend to whom she wrote from Turkey died of smallpox."

Great and revered as is the memory of the late Miss Florence Nightingale, her prestige belongs to the sister profession of nursing—not to "Women in Medicine." As well claim Madame Curie.

"The history of the great midwives of France" may hand down to us noble and brilliant examples of what midwives may have done in the past; but not in this day nor generation, not in this country nor clime, are midwives considered as "women in medicine."

All honor, all praise, to all women who have done good in all ages; but the cobbler should stick to his last and the preacher to his text. "Women in Medicine" cannot take credit to themselves for the good which other women have accomplished in other walks of life, even though those other walks of life may be cousin-german to "women in medicine."

As "to the work which is being done by women in medicine at the present day," Dr. Abbott gives many instances—all of a technical, scientific, research character. Practically all the best countries have established the open-door to medical degrees. In Canada and the United States medical education is now open to women upon the same terms as to men.

That much-criticized and resented bulletin—Bulletin No. 4—of the Carnegie Foundation for the Advancement of Teaching, tells us that woman may enter Johns Hopkins in medicine if she has an academic degree; that she may enter Toronto on the basis of a high school education; that, if she chooses to go to Meridian, Miss., U.S.A., she may enter "if she has no definable education at all."

All over Canada and the United States, freely admitted to the medical profession, year by year, the number of women graduates from both the purely women medical schools and the co-educational schools is declining—and this in the face of the fact that their opportunities have increased and not decreased. This shows that there is no strong demand for "women in medicine."

Men in medicine often wonder why the opposite sex should wish to become "women in medicine." 'Tis true, it is an attractive study, but the life-work is by no means ideal. Woman, with her finer sentiments, her spontaneous goodness and her spiritual affinity, could find a far better profession and a much better sphere —in the pulpit.

The Ontario Medical Association annual meeting we have announced several times before. The dates should be kept in mind—May 30th, 31st and June 1st. Niagara Falls, Ontario, is the spot; the Clifton Hotel the rendezvous.

Good advice is to the effect that this is going to be probably the best and largest meeting in the history of Ontario's medical organization. It should be and deserves to be well patronized this year on account of the courtesy of the officers last year joining with the Canadian Medical Association in the large meeting we had in Toronto.

Niagara Falls should prove an ideal spot for such a meeting; and large numbers will go from London, Hamilton and Toronto, as well as from the sister cities of Niagara Falls, N.Y., and Buffalo. The well-populated Niagara Peninsula will turn out to a man.

Never was there a better programme. Entertainments will be numerous and of a very enjoyable order.

The advantages socially and otherwise of meeting under one roof are rarely so satisfactory as on this occasion; and the Clifton Hotel management may be depended upon to look well to the comfort and enjoyment of its medical patrons at this time—May 30th and 31st, June 1st.

The Canadian Medical Association will this year hold its 44th annual meeting in the new McGill Medical Buildings, Montreal, on the 7th, 8th and 9th of June.

On another page we are privileged to publish a preliminary announcement, which shows the organization for the meeting is well in hand and that many excellent practical and scientific papers are already on the programme.

Every effort is being put forth by the profession in Montreal to eclipse the largest meeting ever held, that of Toronto last year; and good and loyal members of the C. M. A. even in Toronto will try to help in the attainment of the end desired.

It appears to us, however, very unwise to hold the annual meetings of the national medical body so closely following upon the meeting of a provincial medical body which rather rivals the former in point of attendance and quality and quantity of papers read and discussed. At least two or three months should intervene, one, say, being held at the beginning of the midsummer holidays and the other at the end thereof.

It is quite likely that the Canadian Medical Association wishes to draw from Ontario just as much as from any other province, so

there is need of great care being taken not to antagonize any provincial interests. It is the same in the Maritime Provinces and in Manitoba. It would seem to us to be somewhat incongruous for a meeting of the Maritime Medical Association to be held one week in Halifax, and the next week the Canadian Medical Association foregather at St. John.

The name of this journal stamps it as provincial and national. Therefore, while we loyally support our own provincial medical association, we are never unready nor unwilling to say a good word for all the other provincial associations. And as we thoroughly believe in Canada for Canadians, so we say, God-speed to the Canadian Medical Association.

Smallpox and Vaccination in the Philippine Islands is the subject of a bulletin sent out from the Public Health and Marine Hospital Service of the United States.

The introductory paragraph reads as follows: "At probably no time in the world's history has the efficiency of vaccination as a preventive of smallpox been so conclusively and successfully demonstrated as in the Philippine Islands since American occupation."

"Prior to 1905, between 3,000 and 4,000 deaths from smallpox were reported each year in the Province of Cabu. In 1905 and 1906 the systematic vaccination of the 650,000 inhabitants was undertaken. In 1907 there were only 94 deaths, and in 1908, 84 deaths from the disease."

When it is considered that from time immemorial there were annually 6,000 deaths from smallpox in the six provinces near Manilla, with a population of 1,000,000; and that now, since 1907, when systematic vaccination was completed, not one person has died of smallpox who had been successfully vaccinated, and that this information is from an authentic government source, it surely proves that the evidence of the value of vaccination as a preventive measure is incontestable.

News Items

Dr. J. L. Todd, Montreal has gone to West Africa to study sleeping-sickness.

Dr. J. G. Fitzgerald leaves Toronto University for the University of California.

Dr. J. N. Elliott Brown, late Superintendent of the Toronto General Hospital, has sailed for Europe.

Dr. A. H. Caulfield won the gold-headed cane donated by the ex-house surgeons of Toronto General Hospital.

The death is announced of Dr. William Warren Potter, for many years editor of the *Buffalo Medical Journal*.

Dr. T. B. Richardson, Toronto, is now in command of No. 10 Field Ambulance, Dr. Fred Fenton having resigned.

The name of Dr. A. E. Garrow has been mentioned as successor to the late Dr. James Bell, as Surgeon-in-Chief to the Royal Victoria Hospital, Montreal.

A nice two thousand medical practice and property is for sale in Western Ontario; unopposed. Further particulars may be secured by applying to this office.

Splendid medical practice, with small property, for sale in New Ontario. Five hundred cash only required. Box 102, Dominion Medical Monthly.

Dr. N. H. Alcock, lecturer in physiology, St. Mary's Hospital Medical School, London, Eng., since 1904, and Vice-Dean of the School, has been appointed professor of physiology in McGill University, Montreal.

Miss Bown, late of London, England, and who has done a great deal of literary work for Rissian Russell and other notable medical men abroad, is at 19 North Street, Toronto, prepared to do translating, epitomizing, shorthand, typewriting and reporting for members of the profession.

Queen's Medical Graduates.—Degree of Doctor of Medicine and Master of Surgery.—W. R. Bateman, Thomasburg; M. R. Bow, Regina; F. C. Boyd, Kingston; F. C. Bracken, Seely's Bay; J. E. Carmichael, Strathcona, Alta.; S. G. Chown, Kingston; W. Y. Cook, Allandale; L. J. Corrigan, Kingston; C. M. Crawford, Kingston; R. A. Dick, Bolton; M. J. Gibson, Kingston; F. W. Gravelle, Portsmouth; W. R. Hambly, Napanee; P. H. Huyck, Kingston; J. V. Jordan, Smith's Falls; G. B. Hendricks, Regina; P. J. Kennedy, Portsmouth; A. Lipman, Kingston; G. B. McCarthy, Thorold; A. W. Macbeth, Lumsden, Sask.; E. F. J. Matthews, Orangeville; H. Mohan, Liverpool, England; N. E. MacDougall, Cana, Sask.; M. A. Mackay, Lemberg, Sask.; J. G. McCannon, Gananoque; R. V. McCarley, Edmonton; C. E. McCutcheon, Seely's Bay; J. J. McDermott, Kingston; J. P. Dermott, Eganville; M. H. McDonald, Sudbury; A. C. McGlennon, Colborne, J. McKenzie, Unity, Sask.; L. H. O'Meara, Fallowfield; J. O'Rielly, Humboldt, Sask.; B. C. Pamerson, Hallville; R. R. Paul, Fort William; G. W. Pringle, Madoc; G. A. Puglow, Kingston; A. J. Randall, Seely's Bay; J. M. Ravary, St. Amour; A. G. Scott, Eden, Man.; R. A. Simpson, Chapman, N.B.; E. E. Steele, Grenada, B.W.I.; G. E. Thwaites, Trinidad, B.W.I.; S. E. Thompson, Kingston; H. C. Wallace, Lumsden, Sask.; W. E. Wilkins, Verona.

The prize of the Chancellor, Sir Sandford Fleming, $70, for the highest percentage on the four years' work, was won by F. C. Boyd, Kingston.

The medalists are: In medicine, F. C. Boyd; in surgery, R. V. McCarley, Edmonton.

A complimentary banquet was tendered Dr. J. N. E. Brown Saturday night, April 8th, at the York Club by the members of the medical staff of the Toronto General Hospital, on the occasion of his retiring from the Superintendency of that institution. Dr. Bingham was chairman, and Dr. Brown was presented with an illuminated address, which was read by Dr. Wishart.

The address told of the six years of successful administration of Dr. Brown at the hospital, of his excellent equipment for the post, and assured him that a wonderful degree of harmony in the working of the whole complicated machinery of the hospital had been effected under his management. Dr. Brown was especially commended for faithfulness in the discharge of duty, for constancy to his post, late and early, and for never-varying courtesy, sympathy and good temper in dealing with the difficult and hetero-

geneous situations which occur daily in hospital management. Reference was made to the fact that he had added prestige to the hospital abroad by his mastery of the technique of hospital administration and by his publications thereon.

Dr. Brown replied, expressing gratitude for the honor tendered him, and gave to the members of the hospital staff much credit for the success of the institution.

Dr. R. A. Reeve presented Dr. Brown with a beautiful silver salver, and spoke in a very laudatory and kindly manner of Dr. Brown's sterling qualities and the splendid work he had done as Superintendent of the hospital. Dr. Bruce, Dr. Cameron, Dr. Temple, Dr. Grasett, Dr. Adam Wright, Dr. Baines and Dr. Ross also spoke in a similar strain, and expressed their deep regret at the loss the General Hospital would sustain in Dr. Brown's departure.

The following members of the staff attended the dinner: Drs. McPhedran, W. P. Caven, Chambers, Primrose, McIlwraith, Fotheringham, Thistle, D. C. Meyers, Johnston, Gordon, Trow, C. L. Starr, F. Starr, Marlowe, MacLennan, Malloch, Harold Parsons, Goldie, Joseph Graham, O. R. Mabee, Geoffrey Boyd, King Smith, Richardson, G. W. Ross, Colin Campbell, Goldsmith, Kinnear, Howland, Hendry, Royce, Burson, Lowry, McMillan, Strathy, A. A. Beatty, W. Jones, J. A. Roberts, Gallie, Shenstone, Cole, Hendrick, John McCollum, Arthur Wright, W. Mabee, and Robertson.

The eleventh annual meeting of the Canadian Association for the Prevention of Tuberculosis will be held in the Hygienic Institute, London, Ont., on Victoria Hospital grounds, Wednesday, Thursday and Friday, May 17, 18 and 19, 1911, beginning on Wednesday at 2 p.m. Evening meetings will be held in the Y.M.C.A. Auditorium. F. G. Adami, M.D., F.R.S., President; Geo. D. Porter, M.B., Secretary. This is the provisional programme:

Wednesday, May 17th, Hygienic Institute.—Reports from Secretary and Treasurer; Reports from Affiliated Societies: Appointment of Special Committees. Y.M.C.A. Auditorium.—Address of Welcome, Mayor Beattie; President's Address, J. Geo. Adami, M.D., F.R.S.; Address, "The Present Outlook in the Compaign Against Tuberculosis," Dr. Livingston Farrand, of New York.

Thursday, 18th, Hygienic Institute.—"Tuberculosis Among Children," Dr. J. H. Holbrook; "The Tuberculosis Clinic," Dr.

Harold Parsons; General Discussion, led by Dr. J. H. Elliott; "Sanatorium Treatment," Dr. C. D. Parfitt; "Women's Work Against Tuberculosis," Mrs. P. D. Crerar. Y.M.C.A. Auditorium.—Address, "Relation of Bovine Tuberculosis to Public Health," Dr. E. C. Schroeder, of Washington, D.C.; Addresses, Hon. Sydney Fisher, Minister of Agriculture, Hon. Adam Beck.

Friday, 19th, Hygienic Institute.—"Municipal Sanatoria," Dr. J. W. McCullough, Chief Health Officer of Ontario; "Prevention and Treatment of Tuberculosis in Rural Municipalities," Dr. Wm. C. White, Pittsburg; Business and Election of Officers; Reception at the Queen Alexandra Sanatorium.

Medical Reunion.—A programme has been prepared for the reunion of graduates in medicine of McGill University, which takes place in June.

Monday, June 5th.—Informal luncheon at the McGill Union by members of teaching staff of the Medical Department to the graduates in medicine. Afternoon—Convocation in Royal Victoria College. Evening—Opening of new building; conversazione given by the governors of the university.

Tuesday, June 6th.—Morning and afternoon—Clinics and demonstrations in hospitals and laboratories; private entertainments. Evening—Banquet tendered by the members of teaching staff of the Medical Department to the graduates in medicine.

Class reunions.

Headquarters, for information, registration, letters, invitations, etc., at McGill Union. Open Monday, 9 a.m.

The Central Block and East Wing of the new medical building have been in use during the past session, while the West Wing is now rapidly nearing completion and will be ready for occupation at the time of the reunion, so that the formal opening of the whole building will take place. His Excellency the Governor-General has again consented to be present.

During the latter part of the week in which the reunion will be held the Canadian Medical Association will meet in Montreal. Dr. F. G. Finley is chairman of the Reception Committee, which is dealing with the special arrangements in regard to hotel accommodation, etc.

This reunion of graduates in Medicine should not be confused with the general reunion of all graduates of the university which is being planned for 1913.

Correspondence

Dear Mr. Editor,—

We are writing the Editors of our Dominion asking their co-operation in securing help for the famine-stricken Province of Anhui and Kiangsu in China, where nearly three million people are destitute and perishing.

The conditions there are appalling. The harvest was all destroyed by the terrible flood, and no food can be had from the soil until June or later. Many villages were entirely swept away, and the people left homeless and in dire distress. Multitudes gather together in great camps; those who are strong enough wander over the hills, pulling up roots of weeds for fuel in cooking the pittance of rice they may receive from the relief agencies. The suffering is terrible. Thousands of tottering babies, boys and girls clad in rags—if clad at all—are about everywhere; old men and women hobble about leaning on sticks for support, or lie by the wayside, their eyes staring up in mute appeal. Many thousands have perished, and it is estimated that over a million will die unless help is *immediately* sent.

The Chinese Consul-General at Ottawa writes that the distress is indescribable. The Honorary Secretary of the Distributing Committee in Shanghai cables that the famine area is larger than at first believed. Bishop White, of Honan, cables an urgent appeal for help.

The one hundred thousand dollars asked from Canada to help meet this awful situation should be *easily and immediately secured.* ONE DOLLAR AND FIFTY CENTS WILL SAVE A HUMAN LIFE. How many lives will your readers save?

The Editors of our country can do more than any other class to assist in this work. We ask you to make a strong appeal through your paper, making use of this letter as you may think necessary, noting that His Excellency Earl Grey, His Honor the Lieutenant-Governor, J. M. Gibson, and the Hon. Sir James Whitney are giving this movement their hearty support. We suggest that in making the appeal you give your readers the alternative of sending contributions direct to the Treasurer of the Central Committee, Mr. S. J. Moore, 445 King Street West, Toronto, or sending to you; and that in the latter case you acknowledge all such contributions

through your columns and remit weekly to the Treasurer, Mr. Moore.

Trusting that in response to this cry of suffering humanity you will do all you can, and that we may receive a reply from you and a copy of the paper containing your first appeal.

On behalf of the Committee, we are,

Yours sincerely,

W. A. Charlton, Chairman

J. H. Gundy, Secretary.

Publishers' Department

Modern Martial Therapy.—Amid a veritable swarm of new medicinal agents of all varieties that have been introduced to the therapist during the last twenty years, and in spite of the great advances in general medicine during the same period, there has not as yet been proposed any remedy which can successfully compete with iron in the treatment of anemic and generally devitalized conditions. This metallic element, in one form or another, is still the sheet anchor in such cases, and when intelligently administered in proper form and dosage can be depended upon to bring about marked improvement, provided serious incurable organic disease is not the operative cause of the existing blood impoverishment. The form in which to administer iron is, however, very important. The old, irritant, astringent martial medication has had its day, and properly so. Probably the most generally acceptable of all iron products is Pepto-Mangan (Gude), an organic combination of iron and manganese with assimilable peptones. This preparation is palatable, readily tolerable, promptly absorbable, non-irritant and still distinctly potent as a blood builder and general tonic and reconstructive.

Proper Medication and Cheerful Company.—During the past two months we have met with more la grippe than anything else, and the number of cases in which the pulmonary and bronchial organs have been very slightly or not at all involved has been greater than we have noted in former invasions. On the contrary, grippal neuralgia, rheumatism and hepatitis have been of far greater frequency, while the nervous system has also been most seriously depressed.

With each succeeding visitation of this trouble we have found it more and more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently, we have relied upon mild nerve sedatives, anodynes and tonics rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encouraging skin and kidney action, with possibly minute doses of blue pill or calomel. We have found

much benefit from the use of antikamnia and salol tablets, two every three hours, in the stage of pyrexia and muscular painfulness, and later on, when there was fever and bronchial cough and expectoration, from an antikamnia & codeine tablet every three hours. Throughout the attack and after its intensity is over, the patient will require nerve and vascular tonics and reconstructives for some time. In addition to these therapeutic agents, the mental condition plays an important part, and the practitioner must not lose sight of its value. Cheerful company, change of scene and pleasant occupation are all not only helpful, but actually necessary in curing the patient.

The Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street, besides arranging the sale of medical practices and properties between vendors and vendees, also is in a position to furnish locum tenens work and assistanceships especially to Council graduates at all times. The Exchange also has at present a number of applications from different villages where there is no doctor, and where they want one to locate, and the size of the villages and surrounding country would warrant one believing that a practice of at least from $2,000 to $3,000 a year could be done. Anyone interested in any of the above can secure full particulars by dropping Dr. Hamill a request. In fact the Medical Exchange endeavors to act as a central depot to secure a short cut to the goal desired by physicians. Offers of practices for sale will be found among our advertising columns.

The Bugbear of "Indigestion"—"It is often said that ours is 'a nation of dyspeptics.' Medical men appreciate how apt this statement is, and never was there a time when it was more true. Only yesterday one of them remarked, with a touch of humor, that 'people are living so fast to-day that they do not stop to masticate their food'—a wise observation, we must admit.

"And besides—in the matter of eating—have we not, as a race, departed from the so-termed simple life? Have we not in more than one way become denatured rather than civilized? It seems that the things people eat to-day are censored to tickle the palate rather than nourish and upbuild the body, and the consequence of such pleasurable and improper eating is a disordered stomach." —*From a Brochure on Taka-Diastase.*

One is tempted to quote further from this booklet, so interesting is the story in subject-matter and in the manner of its telling. To do so, though, were to defeat the present writer's object, which is to insure a wider audience for the booklet itself—a booklet which is well worth having, whether or not one expects to avail himself of its therapeutic suggestions.

As the quoted paragraph attests, the brochure is well written. Its literary flavor, however, is but half its charm. In its physical make-up the booklet is a distinct novelty, its quaint cover design, its fitting inner embellishments, and its oriental suggestiveness lifting it well out of the casual and commonplace.

The brochure tells how Taka-Diastase came to be; tells how it is made, and in the language of the distinguished chemist and scientist who evolved and gave to the world this valuable ferment. It explains, in attractive, readable form, how Taka-Diastase acts in defective starch-digestion, in gastritis, in diarrhœa and constipation, in wasting diseases, and in the diet of infants. It contains a full list of Taka-Diastase products, and gives hints as to dosage. Altogether, it is an important little work, and one that readers of DOMINION MEDICAL MONTHLY are advised to send for. A copy may be obtained by any physician by addressing a request for the "Taka-Diastase Brochure" to the publishers, Parke, Davis & Co., Walkerville, Ontario, providing, of course, the edition has not previously been exhausted.

LAYING aside all sentiment concerning the practice of medicine that has been handed down from the past, when physicians made no charge, but accepted honorariums, the fact remains that the physician, like the business man, must keep his income equal to or above his expenditures in order to maintain his credit. The business man from whom he buys expects to be paid; so why should not physicians also expect to be paid for their services? If a physician collects a good share of his accounts each year, it not only enables him to keep his family comfortable, but it also enables him to buy journals, books, instruments and other accessories, that make it possible to render better services to his patients. Physicians should endeavor to collect from all who are able to pay, even invoking the aid of the law when necessary; but always remembering to take care of those who are unable to pay. It is better to do less business at a proper remuneration than twice the work at half-pay. The income will be the same, and there will be more time for study and recreation. The physician's worst enemies are those who

have old, unsettled accounts; and these enemies can be changed into friends if they can be made to settle their indebtedness. A person who owes the physician money and does not intend to pay will be one of the first to knock him. "Short accounts make long friends." By accustoming all classes of patients to an early rendering of accounts, while the amount is small and the service is fresh in memory and appreciation, the satisfaction of both patient and physician will be better assured, collection facilitated, and a better financial morale promoted. The regular collection of accounts has several good effects on a doctor's patients; it teaches them that he expects to be paid for his services; it prevents the bill becoming so large that they are unable to pay it; it weeds out bad payers early, and it avoids many losses due to removals and deaths. To avoid payment people go elsewhere. A good rule to follow is never to allow an account to get larger than a family can comfortably afford to pay. It is unquestionably easier for patients to pay and for a physician to collect $10 twelve times a year than $125 once a year—or even $30 four times a year. Soon after services are rendered a statement should be rendered, and on the first or fifteenth of each month thereafter. In long-continued cases, the physician should try to collect something while attending the patient. Some men never present a bill, but wait the patient's pleasure to pay. This is demoralizing, as it puts the physician in a wrong light. The patient gets the idea that the physician does not need the money, and can wait, and he is then often forgotten. Others present bills only once a year, which plan is also open to objection, for the patient accidentally or intentionally forgets the circumstances surrounding a case or the items of the account, and disputes the bill. After sending two or three statements and receiving no response, nothing gives such good results as personal visits. The accounts may be given to an attorney or a local collector. It is important that a physician keep his word with his debtor. If the physician states that he will sue after a certain date, if the individual fails to make a satisfactory arrangement about his account, then he must do it. The moral effect of a successful collection is of more value than the costs. Having people say, "Dr. Blank is a good doctor, but he expects his pay," is worth hundreds of dollars, and the reputation can be acquired by a couple of years of close collecting. The income from a medical practice rarely equals the income obtained by men of equal ability, whose education and capital are invested in commercial pursuits, notwithstanding the great responsibilities physicians carry which laymen escape. The principal reason for this is that physicians have a constant tendency

to settle down to a level—and that the lowest level of professional fees—from which they find it difficult to rise. There is too much tendency to dull routine in charges. There should exist a wide range of charges for medical services, depending on several factors, such as the severity of the case, time given to it, the dangers to the physician and his practice, and the ability of the patient to pay. People should be impressed with the fact that the fee bill represents the minimum fee for ordinary services only, and that when special attention is required a fee in accordance with it should be expected. This is done in surgical cases; why not in medical cases? The price of a visit does not necessarily pay for services rendered. When, therefore, physicians try to collect something for extra services they are invariably confronted with the settled price of a visit. Such a procedure by no means compensates the physician under all circumstances. A rich man will have his life saved for a thousandth part of what he will pay a lawyer to save his business, and then he will object to the physician's bill. The lawyer long ago learned to value and to charge for special services according to their value and according to the ability of the client to pay; he no longer charges so much a visit or consultation. When a physician has saved a patient from death or from poisoning he should charge for a major operation, which is what has really been performed, and he should not send a bill for $2 for a night call. It is the medical profession's duty to educate the unthinking public to appreciation of the fact that it takes more skill and a finer quality of judgment to carry a patient through a long period of critical expectancy terminating in a successful accouchement, than to amputate an arm or leg, and that physicians should be paid accordingly. In attending contagious diseases, physicians incur danger to themselves, their family and their practice. They should be compensated for the risk and the loss sustained by a reward at least double that received in ordinary cases. There is no need of rendering an itemized account to patients. In making out a bill, medical men should take into consideration time, ability and service; nothing less than this will insure the justice that they deserve. Unless physicians come to some understanding of this kind with themselves, unless they ask for a professional fee in proportion to their service and without fixed rates, they will never be paid for what they do. For example, during certain stages of a case of pneumonia or diphtheria, it is important that they be able to watch the case very closely and adapt treatment to the varying conditions, instead of making a regular visit and going back to the office to await further summons. If a lump charge be made, they will feel

at liberty to call as often as necessary. The dead-level fee—the same price for everybody—for all kinds of cases—should have no place in medicine. It certainly pays to dispense: First, the patient has his treatment at once; second, he will return if he needs more medicine, and the physician can see the effect of the medication and change, continue, or discontinue it as necessary; third, the patient cannot pass the prescription to his friends who are "just as he was." A physician who habitually writes prescriptions, or prescribes proprietary preparations, simply hands over to the public a part of his income. Hit or miss, the laity will essay to treat themselves and even their friends and neighbors by the name or number on the bottle or box. At times, when the physician has not the appropriate medicine, it will be necessary to write a prescription, but this will not happen often, if he learns thoroughly the action of the most important drugs, and carries them in his case. Let physicians have printed on their prescription blanks, "Do not repeat," or "*Ne repetatur.*" The New York Board of Health undertook to ascertain the extent to which substitution was being practiced in New York City, and sent out 373 prescriptions for phenacetin, with the result that only 58 were found to be pure phenacetin; in 315 there was substitution. To sum up: Let physicians collect while bills are small; educate the people that the fee schedule is only a minimum one; present bills in lump sums, and keep guard over prescriptions.—Charles Haase, M.D., Elmira, N.Y., in *J.A.M.A.*

The Doctor's Wife.—A good wife is one of the best assets of a physician, and is "rather to be chosen than great riches." All women are not fitted to be doctors' wives, only about one in a thousand. When a boy I used to be sent after our old family doctor when someone was ill in the family. How well I can remember how the doctor's wife met me at the door with a pleasant smile and a warm grasp of the hand. She had a sweet face, and it made a great impression on my boyish mind. She would inquire all about the family, and feel just as much interested in our family as if it were her own. I did not care much for the old doctor's drugs, but I learned to have a great respect for his wife. Thus it is that a doctor's wife, with a little tact and kindness, can help her husband to get business and hold it. But unfortunately women are not all alike, and most women, when they marry a man, think that he belongs to them soul and body. As soon as the marriage takes

place they proceed to hang out a sign: "Keep off the grass. This man belongs to me." It is a well-known fact that the doctor is a sort of "father confessor." Most of the doctor's patients are ladies and they go to him with all their troubles. If Charlie gets gay and kicks over the traces sometimes the old family physician is sure to hear about it. If he is a successful physician he gets the confidence of the ladies. They believe in him, and of course they feel that they can go to him, tell him just how they feel, for they feel that they can trust him with the greatest secrets. If a doctor's wife is at all inclined to be "jealous," when she sees a lady enter the office and is closeted with him for over ten or fifteen minutes, she begins to imagine something wrong. When the lady comes out of the office the doctor's wife greets her with a sour face that has driven many a lady patient away. When she meets her husband, he is liable to get "all that is coming to him." In my experience as a practical man I have seen some queer things. Deliver me from a jealous woman! She has no business to be a doctor's wife. She is out of her place. Many a doctor's business has been ruined by a jealous wife. Many of them will not allow their husband to attend a confinement case. They peep through the key-holes, listen at the door of his office, spy over the transom, open the door and walk in unannounced when he is consulting with one of his lady patients, and in many other ways make themselves a general nuisance. There is another class of doctors' wives with long tongues, who talk too much. They tell everybody who will listen to them about the doctor's patients. Many a good doctor's business has been ruined by his wife's tongue. A doctor's wife, of all women, must be discreet and never talk about her husband's patients. As her husband, he naturally confides a good deal to her about his practice, but she should learn to respect his confidence at all times and in all places. She can do a whole lot for her husband if she will: see that his office and reception-rooms are cheerful and tidy, have his meals at regular times, and see that he gets the food he likes and ought to have. Many a doctor's health has been ruined by overwork. Many doctors' wives, not fully realizing the work their husbands have to do—exposure to all kinds of weather, loss of sleep, the constant care and worry of his profession will in time break down the strongest constitution. It is then that he needs a wife's best care, her sympathy, her sweet womanly love. She should watch over him to see that he gets a proper amount of sleep and that he does not work at his profession when sick and full of pain. Many a good doctor might have been saved for many years of usefulness in his profession if his wife had only seen and realized the fact that her

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Original Articles

CASE OF ENTERO-UTERINE ANUS.*

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Report of a case (with specimen) of an entero-uterine anus following an abortion, treated successfully by hysterectomy and resection of bowel.

Mrs. H., multipara, aged 41 years, was referred to me by Dr. Gowan, under whose care she had recently come, after having suffered for many weeks. I saw her on August 10th, 1909, in consultation with the doctor, at St. Michael's Hospital.

Late in May, or early in June, within the first or second month of pregnancy, she had an abortion, following which there developed an entero-uterine anus. Presumably the uterus was punctured during the induction of abortion or during later manipulations, and then the intestine was either dragged in through the opening or it herniated through. At any rate a few days later the fecal matter discharged from the uterus into the vagina, in its entirety, there being none whatever passed per rectum.

Meanwhile the patient presented signs of pelvic peritonitis and was very ill. Later the peritonitis subsided, but she gradually became emaciated. The discharge was of fluid consistence and so irritating that excoriation existed all over the perineum and half way down the inner sides of the thighs, making her distress nothing short of terrible.

*Read at a meeting of the Surgical Section of the Academy of Medicine, Toronto, November 16th, 1909.

To say the least, her condition was not encouraging when one contemplated the radical procedures necessary to restore her to health.

On examination with the speculum one could see the fluid fecal matter escaping from the eroded cervix. Bimanual examination revealed a matting together, in mass formation, of the uterus and all the structures in the right half of the pelvis. The body of the uterus was somewhat enlarged, though fairly firm and apparently empty. The fundus seemed free, but the lower segment was quite fixed. By rectum the mass could be felt immediately above the right utero-sacral ligament. There was no apparent involvement of the rectal wall.

The conclusion arrived at was that the opening was between the small intestine, probably low down, as the emaciation was not extreme considering the time elapsed, and the lower segment of the uterine body.

This probable situation, together with a consideration of various factors, such as the patient's age, the history of peritonitis following the accident, the probable density of the adhesions, the time elapsed, the infected condition of the uterus, and the difficulty of dealing effectively with the tear in the uterus, which, besides being infected, was not recent, led one to decide upon the operation of which the various steps, as performed on August 11th, were as follows:

1. Preparation of the abdomen. 2. Cleansing the vagina with green soap and water and solution of bichloride of mercury (1 in 2000). 3. Closing the cervix with silk sutures to prevent the escape of any fecal matter. 4. Re-cleansing the vagina and cervix thoroughly. 5. Vaginal section into Douglas' pouch and division of vaginal vault all around the cervix and partial separation of the bladder from the uterus. 6. Change from perineal to abdominal position, opening abdomen in middle line and change to Trendelenburg position. 7. Examination of pelvic contents, revealing a conglomerated mass of omentum, intestines, uterus, tube and ovary in the right half of the cavity, the left half being fairly normal. 8. Packing away free coils of intestine with sterile gauze strips so as to expose the uterus and left adnexa. 9. Ligature of the left ovarian and uterine arteries with section of the left round and broad ligaments from above downward into the vagina. 10. Tilting the uterus and mass to the right and pulling it up, and ligature of the right uterine and ovarian arteries with section of the right round and broad ligaments from the vagina upward. 11. Lifting the uterus, tubes, ovaries and the conglomerated mass up through the abdominal incision. 12. Packing the pelvis with strip gauze,

the first end being pushed into the vagina for removal later by that route. 13. Relief of adhesions and the isolation of the intestinal loop entering the uterus and protection of the general peritoneal cavity by more gauze strips. (The loop was not far removed from the ileo-caecal valve, being a part of the ileum.) 14. Resection of the affected loop and anastomosis by silk suturing. As the proximal end was much larger than the collapsed, unused, distal end, the latter was closed and a lateral opening made into it to fit the proximal end. The loop removed was about ten inches in length. 15. Removal of gauze strips and change to flat abdominal position. 16. Closure of abdominal wound after a small wick of gauze was carried through a stab wound in the right iliac region to the region of the anastomosis, but not in contact with the sutures. 17. Dry dressings.

The operation was well borne, the pulse being about eighty on completion. I was assisted by Dr. Gowan and the house surgeon, Dr. Parker, and was indebted to Dr. R. J. MacMillan for most excellent, though long and tedious anesthesia.

So far as the surgical after-condition was concerned, there was little to be noted except a mild local infection, as evidenced by the escape of some foul-smelling pus from the small stab drain and also from the vagina two or three days after the packing was removed. This occurred about the end of the first week, but at no time was there any sign of a fecal leak.

There was no trouble from vomiting nor abdominal distress, and feeding was commenced by mouth after twenty-four hours. No purgative was found to be necessary. The bowels moved of their own accord on the fifth day, and after that daily without more assistance than an occasional enema, the tongue meanwhile remaining quite clean and the appetite good.

The physical condition improved so rapidly that she was able to go to her home in the country on September 10th, just one month after operation.

In spite of all this an unfortunate termination was barely escaped. On August 27th, that is, sixteen days after operation, after three or four sleepless nights owing to intense heat and somewhat noisy surroundings, she became despondent and suddenly leaped out of bed and into the open window. The screams of another patient who saw her brought the nurse hastily in and just in time to catch her by the ankle and hold her until assistance arrived. Following this she was removed to a small private hospital, where she improved rapidly, though at the time of her discharge she was still somewhat despondent. Later reports, however, showed that complete recovery had ensued.

The specimen showed the intestinal wall firmly embedded in the wall of the uterus on the right posterior aspect, about three-eighths of an inch above the junction of the body and the cervix. When fresh the anus had a diameter of about half an inch. The proximal end of the loop was moderately dilated and the distal end quite collapsed. The outer end of the right Fallopian tube was enlarged and firmly adherent to the loop at the junction of the two ends. The right ovary was also adherent to the loop.

On careful inspection it was found that there was a complete solution of continuity between the proximal and distal ends, that the part embedded in the uterine wall was altogether proximal, and that the distal end was completely closed by adhesion to the side of the proximal end and the line of junction was protected by the adherent tube and ovary.

Under the circumstances attending the case any attempt to repair the intestine without removing the uterus would have been attended by extreme difficulty and danger. The operation performed afforded one the power of absolutely preventing any escape of fecal matter and reducing the risk of infection to a minimum. Had the case come under observation immediately after the accident the repair of the intestine might have been more easily accomplished and the tear in the uterus successfully treated by suturing or by drainage.

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A CASE OF INFECTION OF AN INDEFINITE NATURE IN WHICH THE ADMINISTRATION OF SODIUM SALICYLATE APPEARED TO HAVE A BENEFICIAL ACTION.

By Graham Chambers, B.A., M.B.,

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The object of this paper is to call attention to the possible value of salicylates in the treatment of acute infectious fevers other than rheumatism. At the outset I may state that I recently have used sodium salicylate in the treatment of several kinds of infectious fevers, with apparent benefit in some. This seems to me to be not an unnatural result, believing, as I do, that the curative action of salicylates in acute rheumatism, a disease which is no doubt caused by bacterium, is due to the action of the drug as an internal antiseptic. I might call attention to the fact that in disease caused by the protozoa arsenical preparations are of therapeutic value in, at least, three, namely, sleeping sickness, syphilis, and malaria. This suggested to me that in the therapy of diseases caused by bacteria, salicylates may be of value in more than one, and the observations which I have made on the subject appear to support this view. I am aware that it is usually difficult to estimate the value of any remedial agent in the treatment of an infectious fever. Nevertheless, if the treatment be rational, and the results apparently favorable, one is justified in calling attention to the observation. The following is a case in point:

J. D., age 24, civil engineer, was admitted to the Presbyterian Hospital, New York, Jan. 5th, 1911, under the care of Dr. Gilman Thompson.

The patient complained of weakness, drowsiness, headache, loss of appetite and feverishness. These symptoms developed on Jan. 2nd, but the patient had been ailing since Dec. 1st, 1910.

During the last six years the patient has worked hard and led a strenuous life. Since January, 1910, he has been a clerk in an office. His habits have been fairly regular. He uses tobacco, but no alcohol.

The patient has had no illness of importance until the autumn of 1909, when he had a fever, lasting five weeks, which was diag-

nosed typhoid, although he was only confined to bed for two weeks. During 1910 his health was only fair, suffering, from time to time, from headache.

Present Condition.—The temperature is 103° F., pulse 120, patient apathetic, spleen palpable and firm, and there is no evidence of cardiac or respiratory disease.

Blood culture, Widal reaction, feces for typhoid, von Pirquet test, sputum for tubercle bacillus, and skiagram of chest are negative, and the analysis of urine gives no abnormal signs.

Blood shows:	R. B. C.	4036000
	Hb.	78%
	W. B. C.	7200
	Dif. Count—Poly.	55%
	Small L.	28%
	Large L.	13%
	Trans.	3%

Jan. 14th.—Since Jan. 5th the patient has gradually improved. During this period several Widal tests and blood cultures have been made with negative results, and the blood picture has shown very little change.

Jan. 16th.—The patient complains of precordial pain, frontal headache and photophobia. The temp. has arisen to 103° F. and pulse to 100. Widal test and blood cultures negative, spleen palpable, no abnormal findings in the urine.

Jan. 20th.—Patient had a chill this afternoon, lasting about twenty minutes. The temperature ranges from 101 to 102° F. a.m., and 103 to 104° F., p.m. Pulse averages 110. The feces are negative for typhoid, and Widal reaction is negative. The W. B. C. count has risen to 17,800, only 31% of which are polymorphonuclears.

Jan. 22nd.—Patient is more apathetic; the cheeks are flushed, lips dry, and tongue dry, with red edges and brownish coating on the dorsum. Thirst is increased. A number of petechiae are present on the chest. A rough systolic murmur is present at the mitral and aortic areas, and has its P. M. I. at the third interspace in the left parasternal line. The cardiac sounds are strong and the pulse regular, with good volume and tension.

Jan. 25th.—The patient is more apathetic and delirious. There is severe precordial pain, made worse by swallowing cold fluids or jolting the bed, and especially by coughing. The petechiae are disappearing. The spleen is not palpable. There is a cough and a slight amount of tenacious, blood-streaked sputum, which, on examination is shown to contain no tubercle bacilli. The temperature ranges 102 to 104° F., and pulse 116 to 120. The urine shows a

trace of albumin, but no casts. The Wassermann reaction is negative. The W. B. C. is 6100, of which 55.5% are polymorphonuclears.

Jan. 27th.—Patient to-day is drowsy, but somewhat irritable and easily excited. Temperature ranges from 101 to 103.4° F. and pulse from 120 to 128. Patient brought to Toronto General Hospital.

Jan. 28th.—Patient lies on his back or right side, complaining of severe præcordial pain with sharp exacerbations brought on by the patient coughing, swallowing cold fluids, attempting to move, or even by anyone walking across the floor. The cheeks are flushed, lips dry, thirst increased, and the abdomen moderately distended. There is a feeling of fulness and dull pain in the epigastrium and left hypochondrium, increased by attempt to palpate the spleen, which cannot be felt. The anterior limit of splenic dulness is in the left mid-axillary line. There is superficial tenderness over the præcordia, so that the weight of the bedclothes cannot be borne. The temperature is 100.4° F., pulse 112. Ears normal. Eyes normal, except for a slight degree of myopia. The urine contains acetone and a trace of albumin. The Russo test is negative. Systolic blood pressure, 122; diatolic, 95; R.B.C., 5,300,000. No plasmodium.

Hb.	87%
W.B.C.	9930.
Dif. Count—Poly.	64.7%
Small L.	32%
Large L.	2-5%
Eosin.	6%
Trans.	2%

Blood cultures negative. There is a diffuse pulsation in the 3rd, 4th and 5th intercostal spaces of the left side, near the sternum. H. A. B. is inside the nipple line, and left limit of deep cardiac dulness extends to 4¾ in. from the mid-sternal line in the fifth interspace. The heart sounds are loud. At the mitral area the first sound is loud, short and rough, and followed by a murmur which is not heard all through systole, and is not propagated into the axilla or neck. The second sound is loud, short and sharp at the apex, and exaggerated at the pulmonary area.

Jan. 29th.—80 gr. of sodium salicylate to be given in 24 hours. Pain somewhat relieved.

Jan. 30.—Salicylate increased to 120 gr. in 24 hours. Patient free from pain except on movement. Sleeps well, but perspires freely at night. Temperature, a.m., 100; p.m., 98.4° F.; pulse, 90.

Jan. 31st—Feb. 7th.—120—160 gr. of sodium salicylate given

every 24 hours without evidence of toxic action. Patient is improving. Temperature normal, except a slight rise on Feb. 1st.

Feb. 8th—12th.—70 to 100 gr. of drug in 24 hours. Temperature normal. Salicylate discontinued on the 12th.

Feb. 13th—14th.—Patient does not feel so well. Maximum temperature 99.4.

Feb. 15th—25th.—80 to 120 gr. of sodium salicylate in 24 hours. General improvement. Temperature normal. Drug discontinued on the 25th.

March 10th.—Patient complains of sharp pain at the level of the 7th rib in the right parasternal line, only present at the end of inspiration, and more severe in diaphragmatic breathing than thoracic. A friction rub can be heard at the end of inspiration. There is also stiffness and an aching pain in the muscles of the right side of the face and neck. Maximum temperature 99.3. Sodium salicylate, gr. 80 per day, given.

March 12th.—Patient free from pain. Temperature normal. Given soft diet.

March 18th.—Salicylate discontinued.

April 3rd.—The temperature has been normal for three weeks. Pulse, 80 to 90. Patient has gained in weight and walks about apparently well. The cardiac dullness extends four inches from mid-sternal line. The first sound is somewhat rough, with an ending not well defined.

The most interesting feature of this case is the apparently curative action of sodium salicylate. This seemed more evident to us than the inference one draws from reading the clinical history. The history indicates that the patient suffered from an infection of somewhat indefinite nature. During the early part of his illness the character of the fever, the enlargement of the spleen, etc., suggested the presence of typhoid, although the examination of the blood and feces gave no support to this diagnosis. With the elevation of the temperature on Jan. 16th—24th, accompanied by leucocytosis, roughening of the first cardiac sound, apical systolic murmur, and petechiae, the tentative diagnosis should be, I think, ulcerative endocarditis, and such was the opinion of Dr. Gilman Thompson, under whose care the patient was at the time. Again the blood and other laboratory tests failed to clear up the nature of the disease. The appearance on Jan. 28th of praecordial distress, made worse by coughing or swallowing, was additional evidence of cardiac disease.

At the time of the return of the patient to Toronto, examinations were made by several of my colleagues and myself, and we were of the opinion that the morbid condition was sepsis, with endocardial

and myocardial manifestations. The pain on swallowing suggested the presence of pericarditis, but we were unable to find any physical sign of it. I may add that we were agreed that the patient was not suffering from typhoid fever. At no time during the course of the disease was there evidence of bone or joint infection.

I shall conclude this report with a few remarks on the pharmacology of salicylic acid. I shall also mention some observations on the subject which I made four years ago (*Canadian Practitioner*, October, 1907).

When salicylic is given internally it combines in part with glycocoll, forming salicyluric acid, a compound analogous in composition to glycocholic acid and hippuric acid. This may be illustrated as follows:

Cholic acid	+	glycocoll	=	glycocholic acid	+ water
Benzoic acid	+	glycocoll	=	hippuric acid	+ water
Salicylic acid	+	glycocoll	=	salicyluric acid	+ water

In my experiments I showed that glycocholic was much less toxic than cholic acid. This observation, as well as the fact that hippuric acid is non-toxic or of very slight toxicity, suggests to one that salicyluric is less toxic than salicylic acid. This was shown by Stockman to be the case, and my experiments confirmed his views. We found that salicyluric acid had very little antiseptic action and had very little effect on the fever of acute rheumatism. In my experiments I also showed that the proportion of the salicylic acid which appeared in the urine as salicyluric acid (combined salicylic acid) varied with the dose. With a dosage of 60 grains a day, nearly all the salicylic acid was excreted as salicyluric acid; and with larger dosages the proportion of "combined" salicylic acid diminished. In other words, the larger the dose the more uncombined salicylic acid appears in the urine. This appears to me to have an important bearing on the pharmacology of salicylic acid, because, if salicyluric acid is not wholly formed in the kidney, which is probable, then the larger the dose of the drug the more uncombined salicylic acid is present in the blood and tissues and the greater the antiseptic action. If, for instance, it were shown that the combination of salicylic acid and glycocoll takes place in the liver, which is not improbable, then the exhibition of 60 grains of sodium salicylate a day would exercise very little antiseptic action, because, as I have already mentioned, with this dosage almost all the drug becomes converted to salicyluric acid. This is, I believe, in accordance with clinical experience, because salicylic acid appears only to be of special value in acute rheumatism when exhibited in large doses, say 100 to 300 grains a day.

The mode of administration of salicylic acid deserves attention. In the exhibition of the drug I am accustomed to use sodium salicylate dissolved in water containing a bitter, such as tincture of orange peel. I rarely add bicarbonate of sodium, which is advocated by many, for the following reasons: (1) Salicylic acid, in vitro, is an active antiseptic, whereas sodium salicylate is not. (2) Sodium salicylate in large doses appears to act as an internal antiseptic in acute rheumatism, and it is possible that the exhibition of bicarbonate of sodium along with the salicylate may lessen the antiseptic action of the latter, for, according to the theory of Binz, the internal antiseptic action of sodium salicylate is due to the neutralization of the base of the drug by the carbon dioxide of the blood, thus setting free salicylic acid. (3) The drug, dissolved in water, with a bitter as a corrective, is generally well borne.

It is for these reasons that I do not generally use baking soda as a corrective for sodium salicylate. I may state that the only cases in which I have used it are patients in whom the administration of the drug produces gastric distress, which, I believe, is usually due to the rapid separation of salicylic acid from the salicylate. In these cases the giving of baking soda tends to neutralize the acid of the gastric juice and to a certain extent check the irritative action of the drug. Whether it actually interferes with the action of sodium salicylate as an internal antiseptic I am unable to state. If it is true, as is stated by some physiologists, that it is impossible in a person with healthy kidneys to render the blood alkaline or increase its alkalinity, by the administration of alkalies then the exhibition of bicarbonate of sodium would do no harm.

Eclampsia.

Heinze (*Archiv. für Gyn.*) gives the following method of treatment: 1. Rapid artificial delivery without the co-operation of uterine contractions: vaginal hysterectomy or abdominal Cesarean section if cervix and os are not dilated: forceps and version if sufficiently dilated. 2. Curetting the uterus if eclampsia persists after delivery, even if the placenta has apparently been removed. 3. Decapsulation of the kidneys if the eclampsia still persists and there are signs of serious injury to the kidney. 4. General measures, including venesection, proctolysis, the Jacquet pack, diuretics, heart stimulants, artificial respiration and inhalation of oxygen.

INSANITY.

By R. H. Robinson, M.D., Toronto.

Physicology is the knowledge of the body; psychology is the knowledge of the spirit; psuchology is the knowledge of the soul.

Medical science and the Bible, when properly understood, are in perfect accord one with the other: "Faith and works going together." "Without me ye can do nothing," and "with God all things are possible to him that believeth." So that in proportion to faith and works going together is God's blessing bestowed. "Faith without works is dead"; and therefore God expects of us that we shall intelligently be able to diagnose and prescribe the most judicious remedies for the diseased condition we meet, and then ask and expect God's blessing to follow according to His will. Physicology implies that much knowledge of the body, whether it be exemplified or not, and in order to obtain the best results the body must be kept free from habits: such habits as tobacco, morphine, cocaine, chloral, liquor, and many others. No matter what binds and controls the human will must be given up. "Purge out therefore the old leaven that ye may be a new lump." "For ye are the temple of the living God." "If any man defile the temple of God, him shall God destroy," *i.e.*, God will let him destroy himself if he chooses that course. The physician's duty is to help him not to do so and assist him to regain his health again, if he has. Medical science must be true to both body and soul to keep the mind right. "No idolator shall enter the kingdom of heaven," makes it obligatory on the part of the physician to sound a note of warning, and if it were not done by him it would often not be done at all, as sometimes there is not much time afforded to call a halt and seek forgiveness.

Psychology includes the knowledge of the mind. When Daniel had the prescience given him as the result of refusing to be defiled by the king's meat and drink, and showed that abstemiousness necessary to develop a clear intellect by living on pulse and water, he exemplified that rational self-denial, while a student at college, and that under the most affluent surroundings provided by the King for all his college students, "in whom was no blemish, but well favored, and skilful in all wisdom, and cunning in knowledge, and understanding science," materialists: but, in addition, he prayed

three times a day for divine wisdom, while the other students, with the exception of Daniel's three friends, sought to develop intellect by the very doubtful methods of self-gratification with a modicum of study thrown in, as some do even now. Liquor and gluttony are never calculated to develop good health and intellect, and what materialistic knowledge they did derive was not honored of God as the most intelligent, and the most intelligent is often required to save some soul and body.

In Daniel was an excellent spirit, and knowledge and understanding, interpreting of dreams, and showing of hard sentences, and dissolving of doubts. Now let Daniel be called, and he showed himself under God equal to the occasion. He had faith in God because he had not defiled himself with the king's meat and drink, and God, to whom all power belongs, honored his fidelity, and he is the same merciful God now. Is insanity due to physical changes in the system? was asked at a clinic recently at one of our hospitals for the insane, and the lecturer (Dr. J.) stated that in four-fifths of all the cases of insanity *no* medical evidence of insanity more than in four-fifths outside the asylum could be determined, and that even in the other fifth there might be a tumor on the brain and yet be quite rational, only suffer pain. The next question was: Wherein does insanity lie? Is it a disease of the soul? The same lecturer's reply was, "Don't know anything about it." The question, no doubt, before the clinic was not looked upon as being strictly according to medical science by some present, while by others it was highly commended. The burden of proof went to show that insanity in most cases is a disease of the soul, that the science of psychology is absolutely borne out by the 107th Psalm, 17-20, and how to deal with it when diseased. No pharmacologist can heal the soul with drugs. "Fools because of their transgressions and because of their iniquities are afflicted: their soul abhorreth all manner of meat; (good advice from father or mother, husband or wife), and they draw near unto the gates of death. Then they cry unto the Lord in their trouble, and He saveth them out of their distresses. He *sent His word* and healed them, and delivered them from their destructions." Because the sickness was in their souls. Matt. 8, 16, says: "And He cast out the spirits with His word." "Lo, bound these many years," yet capable of being delivered by the truth, and there are no end of illustrations not infrequently coming before the Medical Superintendent. Someone has given them the truth—the entrance of which gave light, and once more the mind is free to discern right from wrong. That there are predisposing causes in the physical, such as exhausted nerve energy, harmful habits, alcoholism, syphilis and many other

causes, but we also see hundreds of men and women suffering in the same way outside who are regarded as perfectly sane, and therefore too much stress should not be placed on these accessories or contributing causes, when the tension string snaps and the mind is gone. Insanity *per se* is a disease of the soul, and both soul and body must be treated by their respective remedies, faith and works going together to complete the cure. It would be manifestly unscientific to kneel down and pray God to heal pneumonia or spinal meningitis without using the means to remove the congested conditions. So, too, in insanity, where there are physical complications, water packs, judicious medication, rest in bed and all other helps should go hand in hand with the declaration of God's word and prayer. Faith and works going together every time. There is perhaps no greater power, apart from God's word and prayer, than sanctified music, and if one might be permitted to suggest, no matter how often the piano comes in for some demented patient's revenge, for the sake of the other less violent patients it should next day be put in order as the clocks are by the civic watchmaker in the City Hall. On Christmas eve the writer and his wife were invited to the Christmas eve concert at the Hospital for Insane, Queen Street West, given by the Medical Superintendent, Dr. Clarke, and his gifted orchestra. To see the Medical Superintendent over a thousand patients wielding the baton to their supreme delight was to us a real pleasure and an assurance of success. And next morning about 5 a.m. the writer was awakened out of a three hours' sleep—as, after reaching home about midnight, Santa Claus had to be investigated before retiring—and right before us was "Memory gone how sad the fact," the recollection of the sad condition of some of those in the wards led us to get up and, while not given to poetry, this is what by the favor of kind Providence, came:

YULE-TIDE.

At Queen Street Asylum, 1910.

Memory, how sweet thou art,
When gone how sad the heart;
That vacant look, that vacant stare,
That demonstrates no "image" there.
The body, mind and soul, thy laws transgressed,
And in asylum walls they are obsessed.
Then suddenly that light doth shine,
That makes them once again divine.
And homeward rushes every thought,
To Father, Mother, Sister, "Tot":

And only that the Christmas cheer
Brings hope to them for the coming year,
Fond memory would again be blank
And they once more a hopeless crank,
But Dr. Clarke and his orchestra try
To carry them back to the days gone by,
Of fireside lays
And golden days,
When at Yule-tide they used to sing,
Glory be to the New-born King;
And thus once more they take a stand
To trust in God, at His command,
And never falter, till they are free
And at home once more for a Christmas tree.

163 Wilton Ave., Toronto.

Whooping Cough.

Ecroyd (*Med. Rec.*) writes that one of his patients has accidentally alighted on a cure for whooping cough. While carrying on experiments in his laboratory, at the time suffering for three weeks from the disease, hydrogen was generated. At once his trouble was ameliorated, the mucus disappeared, and when the inhalation was repeated a like result followed. A younger sister with a more severe attack also experienced immediate relief.

Persisting Hiccough.

Kaungiesser (*Med. Klin. Berlin.*) reports a case following an attack of influenza. He first tried hypodermic of atropine sulphate, recently strongly recommended for this condition, but with no effect. After an hour and a quarter the patient was given 5 gms. citric acid and 5 gms. sod. bicarb., both in separate solutions, with resulting distension of stomach and pressure on the diaphragm from below. The procedure was a complete success, the hiccough ceasing at once.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

The Interpretation of Pain and the Dysesthesias. CHARLES L. DANA. *J. A. M. A.*

This is a magnificent piece of work and invaluable to any interested reader. Let me briefly epitomize the article:

Psychology has shown that all mental activities are accompanied by neural activities. There is no imaginary pain, for there will be a corresponding morbid neural condition. There are no functional psychoses or neuroses. Consider the subject of pain in relation to the seat of disease.

Paresthesias and burning are symptomatic of nerve terminal affections; cramping pains point to the muscular and visceral nerve endings; aching and throbbing sensations are typical of nerve trunk disease; sharp, shooting pains occur in ganglion affections; tract and cord disease present numbness and paresthesias; thalamic lesions have smarting sensations; while, lastly, cortical affections are painless. But psychic pains are least understood and must be described in detail:

Dana divides the psychoneuroses into four groups, namely: Neurasthenics, psychasthenics, manic depressives, constitutional inferiors with hypersensitiveness.

Psychasthenics describe their pain with enthusiasm, in a tumultuous flow of words. The pains are fairly definite, such as arm neuralgias, head pains, fixed pains over ovary, etc., and, while usually due at the beginning to some definite sensory irritation, are emphasized and glorified by the psychasthenic condition. As time passes they become what is termed attention pains, and the local process may have long disappeared.

Neurasthenics have pains usually due to some auto-toxemia, to tired and exhausted muscles and nerves, but in time they may become attention pains.

Among the depressives the sensations, which usually affect the protopathic rather than the epicritic types, are real to the patient. "Pains in knees for 15 years," "Boiling in stomach," "Cold or

stinging sensations on back," "Disagreeable and indefinite sensations about the hands and feet." They are conditions which usually do not affect consciousness, but, owing to his depression, he both becomes hypersensitive to these stimuli and his threshold of consciousness is lowered.

The pains are bizarre and characteristic and form for each patient a symptom complex.

Dana has opened out a splendid field for the observant physician; begin and take an interest in the multitudinous pains of your psychoneurotic patients. G. W. H.

The Scientific Evidence of the Possibility of Intestinal Antisepsis. By Hortio C. Wood, Jr., M.D. *Therapeutic Gazette.*

Can the bowel be rendered aseptic? This is a most important question, to which Dr. Wood replies negatively, but claims it is possible to greatly reduce bacterial growth, especially by beta naphthol and creosote. Two factors are of importance, namely: (1) Can an intestinal antiseptic in non-toxic dose influence bacteria in a volume of fluid equal to that of the bowel? and (2) Will such a drug remain sufficiently long in the intestines to perform this effect?

If one admits the bowel content at 4,000 cc., it would require an ounce of phenol or salicylic acid; so that asepsis is impossible, but mild antisepsis possible. Similarly, no drug remains for a long period in the bowel. Yet some delay sufficiently to allow their antibacterial influence to occur. Gross, however has a special duodenal tube which enters the duodenum and removes the contents from that viscus. Blood droplets may be found on examining the material, and yet more interesting is the fact that on blowing down the tube the patient may be conscious of a slight sensibility. (This fact is of interest to those who deny intestinal sensation.)

Chemical examination for blood was negative in the cases examined by Gross, but the Benzidin test succeeded once where the aloin and guiac failed. The micro-chemical tests (Teichmann's crystals) were always successful. G. W. H.

The Diagnosis of Gastric Carcinoma by the Cleavage of Polypeptides. By I. Walker Hall, M.D. (Vict.), and G. Scott Williamson, L.R.C.P., L.R.C.S. (Edin.). *The Lancet.*

This new test for cancer originated by Neuland has already been described in this paper. Hall and Williamson advise its use,

and note the following fallacies: Vomits cannot be used as duodenal enzymes are frequently present. Bile points similarly to duodenal regurgitation. Blood vitiates the test, and while this would appear to render the test useless, yet this requires future consideration. The acidity of the gastric contents must be definitely below .18 HCl.

The test, which depends on the breaking up of glycyl-tryptophane by supposedly cancer ferments into tryptophane is hardly on a sound basis yet. The fallacies appear very powerful objections to its use in practice, yet the results in cases require its consideration. G. W. H.

A Contribution to the Diagnosis of Duodenal Ulcer. By M. Gross, M.D., New York. *N. Y. M. J.*

Duodenal Ulcer is gradually being recognized as a common disease, and the characteristic symptoms may be wisely recalled.

Alternating gastric health and disease, with shorter or longer intermissions; hunger pain, relief by food; rigidity of rectus; painful area on hammer percussion; pylorospasm, mild icterus; and varying acidity to HCl tests,—are all the common signs.

Absence of blood from the stools is more common than the oft-vaunted presence, which is considered diagnostic. Einhorn lets his patients swallow a miniature bucket, and expects a blood-stained rope to diagnose ulcer and its site; the value of the test lies in its interest rather than the result. (It is a wonder that no gastrologist has advised the patient swallowing a leech in a non-soluble gastric capsule, with a bridle around its head, which, being set free in the duodenum, will forthwith attach itself to the sore area and produce the characteristic pains; and when well filled may be forthwith removed by its reins and its suckers examined for traces of the submucous or muscular fibres of the ulcerated area.)

G. W. H.

Surgery

Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

Injury as a Causative Factor in Cancer. William B. Coley. *Annals of Surgery.*

In the April number of the *Annals of Surgery* appears a lengthy and most exhaustive paper on this subject.

After pointing out that trauma has been recognized as a causative factor since remote times, and criticizing Phelps' paper in the May issue of last year (wherein the idea was questioned by Phelps, or, in fact, denied), he goes on to give the results of his own extensive experience bearing on this point, and gives the histories in brief of no less than 970 cases, extending over more than twenty years, and the histories of which were taken by himself.

Up to November, 1897, he had had under his care 170 cases of sarcoma, and at that time he wrote in an article for the *Annals of Surgery:* "No clinical feature of the disease had impressed me more strongly than the frequent association of trauma with its early manifestations." Of the 170 cases reported then 46 gave a history of antecedent trauma, and in 9 of the 46 the tumor developed within one week following the injury at the exact site of injury.

Since writing that paper (1897) he has observed 800 additional cases of sarcoma, of which 179 gave a definite history of antecedent trauma.

Of the whole series of 970 cases, antecedent trauma occurred in 225—*i.e.*, in 23 per cent. The tumor developed within the first month after the injury in 117 of the 225 cases (52 per cent.) of typical acute traumatic malignancy, "the reality of which Phelps and others deny."

In using the word cancer he refers to all varieties of neoplasms, not simply to carcinoma. He tabulates his cases in three groups:

(a) Synopsis of cases published up to 1898.

(b) Cases of sarcoma with antecedent trauma, personally observed since 1898.

(c) Cases of carcinoma of the breast associated with antecedent trauma.

Of all cases in the first two classes (225 cases) 105, or 46.66 per cent., originated in the bone, and 120, or 53.33 per cent., occurred in the soft parts.

After giving in detail the various locations of these lesions, both in bone and soft tissues, he gives a most interesting table, showing the interval elapsing between the time of injury and the appearance of the tumor, as follows:

Less than 1 week	50
1 to 2 weeks	13
2 to 4 weeks	54
1 to 2 months	23
2 to 6 months	31
6 to 12 months	15
1 to 2 years	17
2 to 3 years	5
Over 3 years	17

Thus, of 225 cases, 117 (or over 50 per cent.) occurred within one month after injury.

The interval elapsing between the injury and the appearance of the breast tumor (in group c) was as follows:

Less than 1 week	5
2 to 4 weeks	14
1 to 2 months	3
2 to 6 months	8
6 to 12 months	7
1 to 2 years	5
2 to 3 years	3
Over 3 years	7

Or a total of nearly 60 per cent. within six months after the antecedent trauma. Of a series of 250 cases of carcinoma there was a history of antecedent trauma in 82, or 32.8 per cent. In a similar list of cases of carcinoma, observed by Clarence A. McWilliams in the Medical and Surgical Report of the Presbyterian Hospital, on "Statistics of 100 Cases of Cancer of the Breast," it is stated, with reference to trauma as a causative factor . . . . . : "In our list there is a record on this point in 65 of the patients, of which number 29, or 44.6 per cent., gave the history of a distinct antecedent trauma."

Dr. Coley cites a number of his cases in detail, and assuredly makes out a strong case for trauma as a factor in the causation of neoplastic growth. He says . . . . : "Personally I believe

(and more strongly with increasing experience) that all types of malignant tumors are of extrinsic origin. It is not improbable that what we have hitherto included under the vague term of hereditary influence may some day be proven contagion or virus, as has already been done in tuberculosis. . . . . Whether we accept the parasitic theory of cancer, or still believe in its intrinsic origin, we must admit that trauma plays a direct and important part in the development of cancer. The argument advanced by some writers that if such were true, all cases of trauma or a larger proportion of cases ought to be followed by cancer, is not logical.

"If fifty people were plunged into an icy pond and only two developed pneumonia, by this same reasoning we might say that, because 48 remained well, the shock and exposure were not causative factors in the development of the pneumonia in the two who contracted it.

" The great argument advanced by Segond against the admissibility of trauma as a causative factor in malignant disease is the absence of any definite knowledge of the condition of the parts prior to the accident.

"In order to have such knowledge scientifically acceptable, he believes that there should be evidence of a medical examination of the locality prior to the injury, and such evidence, he states, is entirely lacking, there being no such cases. My own series of cases supplies this deficiency in at least four instances." He then cites the cases:

1. A case of sarcoma of the humerus; injury producing a fracture of the upper and middle third; X-ray showing absolutely normal structure of bone. Six weeks later X-ray, showing a well-developed sarcoma at the exact site of the fracture.

2. Sarcoma in the groin, starting at the exact site of a hernia incision made four weeks before.

3. Sarcoma starting in the fascia about the external malleolus three weeks after the trauma incident to the stretching and tearing of the fascia and ligaments due to the forcible correction of a flat foot.

4. Sarcoma of femur, in a girl nine years of age, the daughter of a surgeon.

Dr. Coley's paper is to be continued, presumably in the May number of the *Annals*, and should prove of great interest, both by virtue of what we have already read, and also because of the authority which his vast experience in the treatment of malignant disease with the mixed toxins has given him.

T. B. R.

Obstetrics

Chas. J. C. O. Hastings, Arthur C. Hendrick.

On Death and Disability Resulting from Childbirth. By H. M. Little, B.A., M.D., Montreal. *Journal of Can. Med. Association.*

The author has availed himself of the clinical material of the Montreal Maternity and also the Gynecological Department (Outdoor) of the Montreal General Hospital.

In the new Montreal Maternity from 1905 to 1909 there were treated some 2,634 patients, and of these 35 died—*i.e.*, 1.33 per cent. mortality. The causes of death were as follows:

Eclampsia	8
Nephritis and Anasarca	3
Vomiting	3
Toxemia	14
Infection	13
Hemorrhage	1
Placenta Praevia	2
Cardiac Diseases	4
Rupture of Uterus	1
Pyelitis	1
Bronchitis	1

i.e., Deaths from toxemias	40 per cent.
Deaths from infections	37 per cent.
Deaths from other causes	23 per cent.

As regards the three deaths from bronchitis, pyelitis and rupture of the uterus, the patients were past recall before coming under the hospital's care. Of course a ruptured uterus should never occur in these days.

Of the two cases of placenta praevia, one died of thrombosis on the tenth day of an apparently normal puerperium, and the other from concealed hemorrhage. Now, thrombosis always means infection—and it is notorious that all placenta praevias suffer from infection unless the very greatest care be exercised. Hence my advice is to be most rigid in asepsis here.

There is hardly any excuse for a death from hemorrhage.

The author advises, I think wisely, not too rapid an emptying of the uterus, keeping the bladder and rectum empty, and seeing that the uterus itself is completely emptied of the placenta and membranes. Half an hour is long enough to wait for the expulsion of the placenta. The writer states an interesting point when he declares that a previous curettement may influence the mode of attachment of the placenta—and so where that operation has been done manual removal is more likely to be required. The writer doesn't state his reasons for such a statement, and I can hardly agree with him.

Infection—Thirteen cases died. The method advised to avoid sepsis is thorough cleansing of the vulva. Never give an ante-postum douche, even when gonorrheal vaginitis is present, and as few vaginal examinations as possible, substituting the rectal examination and external palpation.

Toxemia.—This includes nephritis, pernicious vomiting, and eclampsia. No case of eclampsia that was delivered immediately after the *first* convulsion died. Hence early interference is advised for eclampsia, and also for nephritis.

For vomiting, plenty of fluids and purgatives are advised, but a milk diet is contra-indicated on account of the high calcium content.

When in doubt in these cases induce labor by Krause's method or some modification, after having held a consultation.

Of the disabilities following labor, two rules need to be followed:

1. Forceps must not be applied till the cervix is fully dilated.
2. Extensive laceration of the cervix or perineum should be at once repaired.

As regards tight bandaging of the patient and keeping her on her back: these two factors prevent the spontaneous involution of the round ligaments, keep the uterus tilted backwards, and so keeps a laceration of the cervix gaping, and, lastly, prevent the bladder spontaneously emptying itself, and so compels catheterization. Hence the abdominal binder serves no useful purpose.

Reviews

Text-Book of Operative Surgery. By Dr. Theodore Kocher, Professor of Surgery and Director of the Surgical Clinic in the University of Berne. Third English edition. Authorized translation from the fifth German edition. By Harold J. Stiles, M.B., F.R.C.S. (Edin.), Surgeon to the Royal Edinburgh Hospital for Sick Children, and Chalmers' Hospital, Edinburgh; and C. Balfour Paul, M.B., F.R.C.S. (Edin.), Assistant Surgeon, Royal Edinburgh Hospital for Sick Children. With 415 illustrations. In two volumes. Price, $16.00. Publishers: The Macmillan Company of Canada, Limited, 70 Bond St., Toronto.

The present edition of this exhaustive work may well be described as the "last word" on the subject of operative surgery. Few, if any, European surgeons have had such an extensive experience alike in the teaching and practice of surgery as Professor Kocher, and he has condensed his vast knowledge in the present work, which embraces 450 pages more than the former edition. The whole work has been thoroughly revised and re-arranged. Many of the sections have been re-written, while the additions which have been made, both to the text and illustrations, are such as to make the work now cover the whole field of operative surgery.

The two volumes are divided into five parts, viz.: Section 1, which deals with the following subjects: Preparation for operation, beginning of the operation, operative technique, after treatment, detailed consideration of anesthesia, and details in regard to wound treatment; Section 2, surgery of the vascular system: Section 3, surgery of the nervous system: Section 4, surgery of the extremities; Section 5, surgery of the head and trunk. As already stated, the work is truly exhaustive in its scope, masterly in its style, and lucid, both by virtue of the directness of the text and the wealth of illustration. As all the surgical world knows, Professor Kocher has devised a tremendous number of operations, or modifications of other methods, and, while he gives ample credit for the work of those who have gone before (generally giving their operations in detail), one cannot help being impressed with the many improvements he has introduced into operative technique, especially when the details of his methods are placed alongside those of former operators. To take an example at random: His description of his own method of excising the elbow joint. How clear in its description! And to those who have performed the operation—more especially for tubercular disease of the joint—how much more simple

and satisfactory it is than by the older methods. And so one might go on giving example after example of his keen and logical methods, did space permit. We cannot close this brief and all too inadequate review without a reference to Professor Kocher's preface to this last edition. Seldom has the case for the surgeon been put so strongly and fairly as he has stated it in his preface. After dwelling on the absolute necessity for thorough preliminary training of the surgeon in the matter of making exact diagnoses, and in establishing precise indications for treatment, he goes on to say: "The possession of these requisites would destroy the favorite arguments of those physicians who are inclined to disparage surgery and belittle its successes. They maintain that the cases are innumerable in which unnecessary and even injurious operations are performed, and they are apt to hold the whole profession responsible for such unwarranted operations undertaken by men of little experience. Just as the physician is not permitted to write prescriptions without a knowledge of the action and effects of drugs, so the surgeon should not be allowed to perform operations unless he is capable of first making an exact diagnosis and prognosis.

"Even if we admit that the surgeon is responsible for the results of his operations, it must never be forgotten that omissions and blunders in the previous treatment on the part of the public and the physician respectively account for an infinitely larger number of victims than do the errors of the surgeon."

In answer to the question, "What particular considerations are due to the surgeon from physicians and the public?" he lays down the following: "1. In every case where there is any question of operation the surgeon ought to be summoned in the first instance for the purpose of examination and consultation. 2. The choice of where the operation is to be done, as well as the manner of its performance, should be left entirely to the surgeon. 3. It is absurd to wait till the patient has become moribund before calling in the surgeon."

Truly this is a great work, and one which would well repay the careful study any general surgeon or general practitioner might spend on it. From the standpoint of craftsmanship, these handsome volumes reflect great credit on the publishers. T. B. R.

Cesare Lombroso. A Modern Man of Science. By Hans Kurella, M.D., author of "Natural History of the Criminal," etc. Translated from the German by M. Eden Paul, M.D. Price, $1.50. New York: Rebman Company.

This book deals with Lombroso's activity as a reformer. Some of it is taken from the author's earlier publications upon the de-

velopment of criminal anthropology. It attempts to establish the position Lombroso occupied in the positive study of the world, but does not deal with his great activity as a reformer of criminology and criminal sociology. It will, no doubt, be of more interest to the student of medical jurisprudence and psychiatry.

Makers of Man. A study of human initiative. By CHARLES J. WHITBY, M.D. (Cantab.), author of "The Logic of Human Character," "the Wisdom of Plotinus," etc., etc. With forty-seven half-tone and other plates. Price, $3.00. New York: Rebman Company.

This is a very interesting and instructing book. It treats of the lives of forty world-famous individuals, treats of them from the physical as well as the psychological aspect. Their natural vocation is studied, as also family history, parentage and constitution. The book closes with a striking chapter on individuality, its nature and power. It is well worthy a place in every library.

The Principles and Practice of Modern Otology. By JOHN F. BARNHILL, M.D., Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine, and ERNEST DE W. WALES, B.S., M.D., Clinical Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Second edition revised. Octavo of 598 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50; half morocco, $7.00 net. Canadian agents, J. F. Hartz Co., Toronto.

The second edition of this useful work comes to hand. Like its predecessor, the first edition, it is a compact, beautifully printed, beautifully bound book. The illustrations are excellent, some of the plates being colored. The descriptive matter is tersely and simply written. Among the most important additions to the former work are a chapter on the examination of the functions of the ear, which includes the description and formula of a uniform system of tests accepted by the Eighth Otological Congress at Buda-Pesth in 1909; a more extended statement regarding operative injury to the facial nerve; a description of the modified radical mastoid operation for chronic suppurating ears; several paragraphs commenting upon the symptoms, pathology and surgical treatment of labyrinth suppuration. In the chapter upon the influence of nasal and naso-pharyngeal conditions upon affections of the ear, we think that special mention should be directed to the part played by the swollen posterior ends of the inferior turbinates and to adenoid masses behind the tubes.

As the authors state, this work is intended for the use of students and general practitioners in medicine, and we think that it will form a very useful addition to their working library. G. R.

Plaster of Paris and How to Use It. By MARTIN W. WARE, M.D., New York, Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor of Surgery in the New York Post-Graduate School. Second edition, revised and enlarged. Price, cloth, square form, $1.25. De luxe leather, $2.50. Surgery Publishing Co., New York.

The exhaustion of the first edition and the persistent demand for this helpful book were the incentives for this second edition, which has been completely rewritten and enlarged, and thus its scope of usefulness has been greatly extended. Complete new drawings and marginal side notes in red embellish the book, and ninety illustrations are used to more clearly put up to the eye of the reader the intent of its subject matter.

Such information as history, materials, manufacture of bandages, storage, bandages of commerce, calot plaster bandages, the immediate preparation of bandages, application and precaution, removal of bandages, etc., are all given under the contents of the Plaster of Paris Bandages. Then follow such chapters as Application of the Plaster of Paris Bandage to Individual Fracture, Fractures of the Upper Extremity, Fractures of the Lower Extremity, Moulded Plaster of Paris Splints, Plaster of Paris in Orthopedic Surgery, etc., and all presented in such a comprehensive manner as to make this book of particular service to every doctor. The mechanical features of the book are decidedly striking.

Accidental Injuries to Workmen. With reference to Workmen's Compensation Act, 1906. By H. NORMAN BARNETT, F.R.C.S. With article on Injuries to the Organs of Special Sense. By CECIL E. SHAW, M.A., M.Ch., M.D., and Legal Introduction by THOMAS J. CAMPBELL, M.A., LL.B. Price, $2.50. New York: Rebman Company.

As there is no work on the market dealing with accidents and their results relative to the Workmen's Compensation Act, 1906, this book will be welcome to the medical profession. The legal introduction embraces the first fifty pages; the Act itself is analyzed, and what constitutes an accident is explained. There is an important chapter on making reports and giving evidence, and injuries are taken up under injuries to bones, joints, muscles, blood-vessels, nerves, internal organs, etc. Altogether this will be found a very important book for all medical men to possess.

State Board Questions and Answers. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second edition, revised. Octavo volume of 715 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $4.00 net; half morocco, $5.50 net. W. B. Saunders Company, Philadelphia and London: Canadian agents, The J. F. Hartz Company, Toronto.

It is now three years since the first edition of this valuable book for medical students was published. The advances made in medicine in that time have necessitated revision in order to bring it up to date. We consider this a very valuable book for students, as it is not merely a list of papers, but the answers as well succinctly set forth. Indeed, it will well repay medical men to review such a work of this character, putting them in possession of many recent advances in medicine.

International Clinics. Volume I. Twenty-first series, 1911. Price, per volume, $2.00. Philadelphia and London: J. B. Lippincott Company.

The present volume treats of Diagnosis and Treatment, five papers; Medicine, six papers; Pediatrics, one paper; Surgery, four; Ophthalmology, one; Physiology, one; Anatomy, one; Biology, one; Tropical Medicine, one. Nearly one hundred pages are devoted to the progress of medicine in 1910. These deal with treatment, medicine and surgery, and set forth ably what has been accomplished in these departments of medicine during the year. There are several colored plates, figures and other plates in this volume. Altogether it appears to us one of the best recently issued.

A Treatise on Diseases of the Skin. For the use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Sixth edition, revised. Handsome octavo of 1,195 pages, with 289 text illustrations and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $6.00 net; half morocco, $7.50 net. Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

Stelwagon's work on dermatology is so well and favorably known, both to general practitioners and specialists in skin disease, that it is unnecessary for one to call attention to its many excellent characters. It might be described as a comprehensive,

scientific, yet practical book on skin diseases. The author has taken special care to present the subject matter in a plain, elementary manner, which is always appreciated by a student of the subject.

In the present edition much new material has been added and unnecessary and obsolete matter dropped, bringing the book up-to-date.

The work is well illustrated, a character which is to be commended in a treatise on any organ of the body, and especially on dermatology.

Hydrotherapy: A Treatise on Hydrotherapy in General; Its Application to Special Affections; the Technic or Processes Employed; and Use of Waters Internally. By Guy Hinsdale, A.M., M.D., Lecturer on Climatology, Medico-Chirurgical College of Philadelphia. Octavo of 466 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $3.50 net. Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

In the treatment of disease hydrotherapy is an important measure; indeed, there are few general affections in which it is of no value. The medical profession recognize its importance and are making use of it more and more as the science is better understood.

The volume before us is a scientific exposition of the science of hydrotherapy. The text is divided into four parts, namely, general hydrotherapy, special hydrotherapy, technic of hydrotherapy, and the use of mineral waters. Under general hydrotherapy are described the effects of baths on metabolism, blood pressure, rate of heart, blood and respiration. The second division of the work is devoted to hydrotherapy in the various diseases in which it is useful. This is followed by chapters on technic, in which are described the various kinds of baths, rubs, douches, packs, etc. The remaining parts are given to the internal use of water in disease and the special value of mineral water.

The book is well written and gotten up, and we can recommend it to anyone wishing to obtain information on the subject of hydrotherapy.

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COMMENT FROM MONTH TO MONTH.

The Appointment of Dr. Charles J. Clarke to the superintendency of the Toronto General Hospital is the best possible which could be made.

An experienced and capable administrator, occupying a leading position in the Canadian medical profession, an acknowledged expert in psychiatry, the head of the Medical Department of the Provincial University, Dr. Clarke will bring into closer relationship the Medical Department of the University and the Hospital.

The Board of Governors of the Toronto General Hospital have chosen wisely and well and are to be congratulated upon securing the services of a man of Dr. Clarke's ability, experience, and connection.

This journal wishes him every success in his new sphere.

Dominion Registration is a good step nearer. In our next issue we will publish in full the Amendment to the Canada Medical Act which has passed both Houses of Parliament.

Dr. Roddick, as well as Dr. Black, M.P. for Hants, N.S., are to be congratulated upon the successful passage of the bill, Dr. Black being the chief inside promoter, as Dr. Roddick has for so many years been the active outside promoter.

It remains now for the different provincial legislatures at their very next sessions to pass the ratification legislation necessary to make the Act universal and as well make it law.

Those legislatures which did not before pass the ratification legislation should now get actively busy and be the very first to acquiesce. These, it is understood, are Quebec, Ontario and British Columbia. The others will probably have to do so likewise, but as they were agreeable with the Act of 1902, it is quite proper to assume there will be no hesitation with them as regards the amendment.

That this long and much-desired end may now be brought about in a year's time it is safe to predict.

Medical Advertising every now and again engages our attention. That no medical journal could long survive the loss of its advertising patronage is a fact which must be apparent to all. Medical journalism owes a great debt to its advertising patrons. This is equally true of newspapers and magazines.

Medical advertising makes medical journalism possible. Medical journalism, the best or mediocre, has brought to the profession of medicine untold good. Even association journals need and profit by its support.

If this is true, then the profession of medicine owes something to those commercial establishments which consistently or intermittently patronize the advertising pages of the medical press.

To those who consistently patronize the medical press the profession owes the most; to those who intermittently use it the profession owes a great deal; but to those who care nothing at all for the medical press, who even go so far as to sneer at its value, there is nothing left to be said other than that they are purely "out for the coin."

It seems plain then that the profession should patronize those who patronize the medical press. The profession cannot do without the medical press and the medical press cannot do without the medical advertisers.

Those who do not use the medical press at all are mere interlopers.

The cult of the open window, it is said by someone, would in a generation rid Canada of tuberculosis. For long years those active campaigners against tuberculosis have preached the open-air life for the tuberculous, and subsidiary to this the open window.

Indeed, the pendulum has been swung to the extreme limit, and the open window, especially of the sleeping room, has been advocated for all.

With so much publicity with regard to open-air life and the open window and the great advantages to health accruing therefrom, it is interesting to enquire how far the people have gone towards following out the advocacy of the open window.

In city life it would appear that in the late fall, winter and early spring seasons this is not followed out to any very great extent, as one can easily prove by observing just how many windows are open while walking along any street at daybreak.

On a recent morning visit when day was just breaking the writer sauntered homewards along several streets, and although it was a beautifully mild April morning, he was surprised to see only here and there an open window, and even then most of the few which were open were only open to a very slight degree.

This would naturally lead one to the conclusion that the open window is taken very little thought of by the mass of the people and that the publicity campaign so far has produced no particularly striking results.

"Early to bed and early to rise" is an old adage, but most people find the two hardest things in life are to go to bed early and to arise early.

The freshness and quiet of the early morning, especially in spring and summer, as well as the health-giving properties of the purer morning air, should be taken more cognizance of by those fighting tuberculosis; and all would certainly benefit by adopting the rule of arising in spring and summer at daybreak.

The cult of the open window, with the practice of daybreak rising, might well be more actively pushed, but one must not forget that the open window in summer time must be screened from flies and that at all times it renders access decidedly easy for burglars.

Garbage collection and disposal is no doubt a considerable problem in large cities. It is a sanitary matter, and as such should be under the control of the Health Department.

In winter-time snow by-laws are enforced, and every householder is required to shovel the snow from the sidewalks. In summer-time street cleaners are abroad, but the sidewalks and boulevards are totally neglected, except where private enterprise keeps a well-trimmed lawn and a clean sidewalk.

In Toronto this spring the sidewalks and boulevards have

seemed unusually dirty. The present system of collection of garbage, which requires householders to place these conspicuously on the edges of the boulevards, in front or at the sides of houses, is a system which ought to be done away with rapidly. Everyone should take a just pride in seeing a clean city, and clean sidewalks and boulevards are required just as much as clean streets.

There should be a sidewalk and boulevard by-law, requiring all householders or owners to keep these clean and in good condition. But this could not be done where garbage is collected as at present.

All garbage and ashes, where there are no lanes to put receptacles in, should be gone in after by the collectors, and the unsightly barrels, boxes, tubs, etc., kept indoors. Newspapers on boulevards sticks and stones, as well as dirt on sidewalks and boxes and all sorts of things displayed at shop fronts should be abolished. Surely it is time for our city fathers to look alive to the beauties of a clean, tidy city.

A by-law as indicated above seems urgently needed.

Flies should be put to flight, or, better still, kept from flying. Our Health Officer is to be commended for the way he gets after what may be thought little things.

Attacking at breeding-time and screening all windows and outside doors will go a long way, but until a better system of garbage collection is established these flies will still be flying around.

Dr. Hastings is giving battle to a formidable host, but he will have our best prayers that his prowess will prevail.

News Items

Dr. St. Jacques, Montreal, has sailed for England.

Dr. H. A. Bruce, Toronto, has returned from Atlantic City.

Winnipeg is building a hospital for sick children at a cost of $100,000.

Dr. W. T. Shiriff, of Hazeldean, has been appointed Medical Health Officer of Ottawa.

Chilliwack, B.C., is to have a new hospital. Hon. Dr. Young subscribed $1,000 for the purpose.

Remember the dates of the Ontario medical meeting at Niagara Falls—May 30th and 31st, June 1st.

Dr. Llewellys F. Barker was operated on at the Johns Hopkins Hospital for appendicitis and is now convalescing.

Dr. James A. McCammon, Gananoque, has been appointed Sheriff of the United Counties of Leeds and Grenville.

Dr. Thomas Dawson, M.H.O., Calgary, has been appointed Superintendent of the Hospital for the Insane at Pokona, Alta.

Dr. H. G. Pickard, Minto, Man. (Trinity, '95), formerly of Glamis, Ontario, has been appointed Medical Health Officer of Brandon.

Dr. Geo. E. Armstrong, Montreal, President-elect of the Canadian Medical Association, has received the Degree of Doctor of Laws from Queen's' University.

Dr. Charles K. Clarke, Superintendent of the Toronto Provincial Hospital for the Insane, has been appointed Superintendent of the Toronto General Hospital.

New Medical Council, Alberta:—Dr. C. J. Stewart, Calgary; Dr. Brett, Banff; Dr. Mewburn, Lethbridge; Dr. Park, Edmonton; Dr. Crang, Strathcona; Dr. Malcolmson, Frank.

Dr. D. W. Cathell is giving his book on "The Physician Himself" a twelfth and final revision, and will attempt to make it a book without a parallel in usefulness, and also a book without a blemish.

The Manitoba Medical Association will hold its annual meeting in Portage la Prairie on the 22nd and 23rd of June. Dr. Ingersoll Olmsted, Hamilton, and Drs. Fisher, Reese and Cubbins, of Chicago, will be present.

The 42nd annual meeting of the American Medical Editors' Association will be held in Los Angeles, Cal., June 26th and 27th, 1911. The President is Dr. J. MacDonald, Jr., New York, who was for many years the Secretary of this Association.

The Emperor of Germany has conferred upon Dr. William H. Welch of Baltimore the Order of the Crown, second class, in appreciation of his services in propagating German medical science in the United States and in spreading the use of the German language in the medical schools of Ameriea.

Although invitations were only sent out for the Reunion of Graduates in Medicine at McGill on June 5 and 6, when the New Medical Building will also be formally opened, already about two-thirds of those invited have signified their intention of being present. Dr. Casey Wood, of Chicago, is organizing a party of men from the Western States, and Dr. Wilfrid Nelson, of New York, is also organizing a party in New York. These parties will be brought to Montreal in special cars.

The fourth annual meeting of the Academy of Medicine, and the first in their new premises, 13 Queen's Park, was largely attended. Arrangements are now being made for a formal opening of the new building, to be held the latter part of May. The following Fellows were elected as officers for the ensuing year: President, Dr. N. A. Powell; Vice-President, Dr. R. A. Reeve; Past President, Dr. Albert A. Macdonald; Hon. Secretary, Dr. Harley Smith; Hon. Treasurer, Dr. W. A. Young. Chairmen of Sections—Medicine, Dr. Graham Chambers; Surgery, Dr. H. A. Bruce; Pediatrics, Dr. J. T. Fotheringham; Pathology, Dr. J. J. McKenzie; Ophthalmology, Dr. C. Trow; State Medicine, Dr. J. W. S. McCullough. Elective members—Drs. John Ferguson, John Malloch, H. J. Hamilton, J. F. W. Ross, W. P. McKeown, A. McPhedran, F. N. G. Starr, and E. E. King.

Graduates who intend coming to Montreal for the McGill Reunion or the meeting of the Canadian Medical Association, should give particular attention to the following conditions laid down by railway companies in connection with their offer of reduced rates: 1. Each person must purchase, not earlier than June 3rd, a first-class ticket to Montreal, paying regular tariff fare, and at the same time must obtain from the ticket agent a Standard Certificate of such purchase, properly filled in and signed by the agent. 2. If through ticket cannot be purchased at starting point, purchase to nearest point where through ticket can be obtained, there purchase through to Montreal, obtaining at the same time Certificate properly filled in and signed by Agent where each purchase is made. 3. On arrival at Montreal this Certificate will be viséd by a Special Agent of the railway lines at the Registration Office, McGill Union, and *must be attended to on June 6th, in order to obtain benefit of reduced rates on the return trip;* for this a fee of 25 cents will be charged. This Certificate must also be countersigned by the Secretary of the Meeting. The following are the reduced rates offered: From points in Canada east of and including Port Arthur, Sault Ste. Marie, Fort William, and the St. Clair and Detroit Rivers, if 49 or less in attendance, return from Montreal to point of departure, at two-thirds of the lowest regular first-class fare; if 50 to 299 in attendance, at one-third of the lowest regular first-class fare; if 300 or more in attendance, the return trip will be free. These reduced fares apply also to ladies accompanying graduates. It is expected that the number of graduates in attendance will exceed 300. Special rates will also be arranged for graduates living West of Port Arthur and directions as to how to obtain these rates will be sent later.

Programme.

Monday, June 5th.—Informal luncheon at the McGill Union by members of Teaching Staff of the Medical Department to the Graduates in Medicine. Afternoon—Convocation in Royal Victoria College. Evening—Opening of new building. Conversazione given by the Governors of the University.

Tuesday, June 6th.—Morning and Afternoon—Clinics and Demonstrations in Hospitals and Laboratories. Private entertainments. Evening—Banquet tendered by the members of Teaching Staff of the Medical Department to the Graduates in Medicine.

Class Reunions.—At times to be arranged.

Headquarters for information, registration, letters, invitations, etc., at McGill Union. Open Monday, 9 a.m.

Publishers' Department

Surgical Diseases of the Umbilicus.—T. S. Cullen, Baltimore (*Journal A. M. A.*, February 11), after noticing the principal literature of the subject, enumerates and discusses the surgical disorders affecting the umbilicus. Among the non-malignant abnormalities he mentions so-called adenoma, funnel-shaped umbilicus, cystic cavities in the abdominal wall, attachment of Meckel's diverticulum to the navel, patent omphalomesenteric duct, and prolapsus of the bowel through such duct. The term adenoma is a misnomer, but has been so long in use that he employs it. It simply consists in the funnel of mucosa being forced outward and turned inside out. Adenoma may be ligated and cut off or allowed to drop. The parents should be cautioned to watch the child for any obstruction occurring. A funnel-shaped umbilicus can be removed by an elliptical incision removing the entire area and exploring for Meckel's diverticulum, which, if found, should be removed. Where very small fecal fistula exists, one may wait a while for its closure, but, if open after six months, it should be dissected out down to the ileum and removed. A lookout should be made for obstruction in any case. When large it should be removed at once, which is not very dangerous in a healthy child. When prolapsus with inversion has occurred, signs of shock have usually appeared and the chances of saving the child are slight. Of the malignant growths of the umbilicus, four varieties are recognized: (1) primary squamous-celled carcinoma; (2) primary adenocarcinoma; (3) sarcoma; (4) secondary carcinoma. The first of these is very rare and its gross appearance is that of skin cancer ulcer. Primary adenocarcinoma seems to be more frequent, but there is some confusion about it because of the possibility of its being secondary to disease elsewhere. Pernice has collected six cases of sarcoma, but Cullen seems to think that the evidence is not very convincing regarding most of them, which may have been fibromata. Secondary carcinoma is the most interesting of the four and is treated of at some length. If an umbilical nodule is detected in a middle-aged person, Cullen says the condition of the abdominal organs must be thoroughly investigated for signs of cancer of the stomach, gall bladder, intestines, or genital organs. The futility of removing the umbilicus when the primary growth is in the abdomen is especially emphasized. The article is illustrated.

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Original Articles

THE RELATIONSHIP BETWEEN THE DUCTLESS GLANDS AND CARBOHYDRATE METABOLISM.*

By Thomas B. Futcher, M.B., Baltimore, Md.

In accepting the kind invitation of the Chairman of the Medical Section to address this Association, it seemed that it might be profitable to review a field which has been made fertile by the researches of many workers in an effort to throw light on a problem which, as yet, is only partially solved. It occurred to the writer that a review of the subject of carbohydrate metabolism, with especial reference to its bearing on the etiology of diabetes mellitus, would be of interest not only to the physician, surgeon, and obstetrician, but also to the physiologist and pathologist. As the subject is such an enormous one, I have decided to confine myself to a consideration of the influence of the ductless glands on the warehousing of the ingested carbohydrates. Since the scope of such a paper must necessarily be limited, a review of the investigations carried out along these lines must consequently be brief and rather fragmentary.

The glands that I have considered are the pancreas, adrenals, thyroid and pituitary. At this point an explanation is necessary. The pancreas in the ordinary sense is not a ductless gland, but, as we shall see later, it contains innumerable small groups of cells, which are really ductless glands, whose function is entirely different from the ordinary acini of the pancreas, and whose secretion passes directly into the surrounding vessels. Further, it remains to be

*Address in Medicine, Ontario Medical Association, May 30, 1911.

shown whether the pituitary is in a true sense a ductless gland, for, as we shall subsequently see, Cushing has almost conclusively shown that the pituitary secretion is poured directly into the cerebro-spinal fluid rather than into the blood stream.

For a proper appreciation of what happens in true diabetes mellitus or in a temporary glycosuria, a brief statement of our present conception of carbohydrate metabolism in the normal individual is necessary. Although Pavy and others deny Claude Bernard's glycogenic function of the liver, until more convincing evidence is brought forward, we must accept this theory, and still accord to this organ the important duty it is believed to perform in the disposal of the carbohydrates taken in the food and those metabolized from the ingested proteids. According to most physiologists, the carbohydrates eventually reach the liver by way of the portal vein, largely in the form of glucose, or grape sugar, and are there converted by the liver cells into glycogen. The glycogenic function of the muscles is also generally accepted, and it is believed that the whole muscular system contains an amount of this polysaccharia equivalent in weight to that contained in the liver. The muscles therefore constitute a second great reservoir for the storing up of a supply of carbohydrates. When the system demands more fuel to produce energy and heat, the liver reconverts the glycogen back into glucose by the action of a special enzyme produced in the liver cells, and this glucose reaches the systemic circulation by way of the hepatic veins.

In the normal individual it has been shown that at all hours of the day the glucose in the circulating blood ranges within narrow limits, variously stated as being between 0.1 and 0.15 per cent. and 0.1 and 0.2 per cent. Why is it that after a meal rich in carbohydrates this normal glycaemia is still present? It is due to the fact that the surplus of glucose is stored up in the liver and muscles as glycogen and is only slowly reconverted again into glucose and given up to the system as the latter demands it. It has been supposed that the ultimate combustion and disposition of the carbohydrates takes place in the muscles. The actual means by which this is brought about has been the subject of innumerable investigations by physiologists for years. We shall see later whether a satisfactory explanation has been found. Whenever, for any reason, the percentage of glucose in the circulating blood reaches more than 0.2 per cent. we get a condition of hyperglycaemia, and the excess passes over into the urine and produces either a transitory glycosuria, or a permanent glycosuria, as in diabetes mellitus. In marked cases of the latter disease, the percentage of glu-

cose in the circulating blood may reach as high as 0.5 to 0.7 per cent. One can conceive of such a hyperglycaemia occurring chiefly in one or two ways, either as a result of over-production, or, what is much more likely, a deficient combustion of glucose. The problem as to how this hyperglycaemia occurs is the one that has for so long occupied, and still occupies, the attention of those who have made a special study of the etiology of diabetes. We shall endeavor to see whether the study of the functions of the ductless glands has thrown any light upon this puzzling question.

The Islands of Langerhans and Carbohydrate Metabolism.

The first observer to suggest a relationship between the pancreas and carbohydrate metabolism was Thomas Cawley, who, in 1788, found calculi in the pancreatic duct and marked atrophy of the gland in a fatal case of diabetes. This clinical relationship has since been amply confirmed. It remained for Minkowski and von Mering, whose brilliant experiments were published in 1889, to demonstrate in animals that an intact pancreas was absolutely essential to normal carbohydrate metabolism. They showed that complete extirpation of the gland in dogs and other animals was invariably followed by the development of a typical diabetes mellitus with all its characteristic symptoms as seen in man, including a fatal acidosis. If one-tenth of the gland were left intact diabetes did not develop. They were not aware at the time of the true explanation for the occurrence of diabetes in the pancreatectomized animals, nor of the reason why it did not occur if sufficient of the gland were left behind. In 1892 Lépine, of Lyons, was the first to suggest that the pancreas produced an internal secretion containing a "glycolytic ferment," which was necessary for the proper burning up of the glucose in the tissues.

The year 1900 marks a new era in our knowledge of the etiology of diabetes. In that year Opie published from Welch's laboratory a pathological study on interstitial pancreatitis, in which he, for the first time, demonstrated a connection between the islands of Langerhans and diabetes. These groups of cells were first described by Langerhans in 1869, but little or no attention had been paid to them. They were composed of columns of cells, having no communication with the ducts of the gland, but being in intimate relationship with a rich capillary network. They are about the size of a kidney glomerulus, measuring 0.2 mm. in diameter. The islands are situated for the most part in centres of the ordinary gland acini, and are quite distinct, structurally and functionally, from them. They are distributed throughout the whole gland, but are more

numerous in the tail than in the body or head. In tissues treated with Müller's fluid they appear, under low magnification, as conspicuous points of a bright yellow color. With high magnification they are found to be composed of small polygonal cells having a round nucleus and homogeneous protoplasm. These islands, therefore, are really ductless glands imbedded in the substance of the pancreas.

Without going into details, it may be briefly stated that Opie found that in a certain percentage of the cases of interstitial pancreatitis diabetes was an accompaniment of the disease. He showed that the diabetes occurred especially in the interacinar form of pancreatitis, in which the interstitial tissue grows in and surrounds the individual acini, rather than in the interlobular type of the disease. What was of most importance, however, was the observation that diabetes was associated only in those cases where the islands of Langerhans were practically completely destroyed, and this was naturally most likely to occur in the interacinar type. The thought naturally occurred to Opie to make a systematic histological examination of the pancreas in a consecutive series of fatal diabetes cases. He found that in nearly every instance the islands were almost completely destroyed and had undergone a hyaline degeneration. Ssobolew, working independently, published in 1901 practically identical observations on the relationship between disease of the islands and diabetes. In view of the intimate relationship, in his series, between involvement of the islands and diabetes, Opie was led to conclude that there was a very intimate connection between them and carbohydrate metabolism. Laguesse and Schäfer had previously suggested that the islands furnish an internal secretion in the same manner that the thyroid and adrenals do. Owing to their minute size and the impossibility of isolating them from the rest of the gland substance, it has been practically impossible to produce experimental evidence supporting this view, although Ssobolew claims to have done so. Occurring as ductless glands, and being surrounded by a rich capillary network, it is extremely probable that these islands secrete some substance—call it a "glycolytic ferment" after Lépine if we will—which enters the circulating blood, and which is necessary for the proper combustion of carbohydrates in the system.

From what has been said it will be perfectly obvious to everyone that a careful microscopic examination of the pancreas is necessary before excluding it as a cause of diabetes. The gland on macroscopic examination may appear perfectly normal, while on microscopic study these small islands may be found completely degen-

erated, the remainder of the gland structures being perfectly intact. Opie's observations have been confirmed by numerous observers on this continent and abroad, but it must be pointed out that a number of instances have been recorded in which diabetes has occurred without any microscopic changes in the islands having been found. These negative results are subject to two interpretations. One inference is that all cases of diabetes are not actually of pancreatic origin, which is probably true. The other is that, although the islands show no microscopic change, they may be functionally inactive and fail to secrete their specific enzyme, just as we may have a functional inactivity of the oxyntic cells in the gastric mucosa with resultant anacidity of the gastric juice.

Following closely upon these important researches, Otto Cohnheim, in 1903 and 1904, published results of experiments which seem destined to solve the problem of how the glucose of the circulating blood is ultimately burnt up in the body. This is the mystery which has puzzled physiologists for generations. By means of the Buchner press it is possible to compress the juice out of all the cells of any gland or fibre of any tissue. In this way he secured quantities of juice from the pancreas and muscles of cats and dogs. With each of these juices he first experimented separately. Each juice when added alone to a solution of glucose is inactive. When, however, muscle juice and glucose solution were first mixed together, and then the juice of the pancreas added, there was a rapid and complete conversion of the glucose into carbonic acid and alcohol. Cohnheim at first thought that the chemical change that occurred was analogous to Pawlow's researches concerning the relationship between trypsinogen, the proteid enzyme of the pancreas, and proteid digestion in the intestine. Pawlow found that trypsinogen itself was inactive on proteids, but when it came into contact with the "enterokinese" of the intestinal juice it was converted into trypsin, which then caused rapid digestion of the proteids. Cohnheim believes that the ingested carbohydrates are finally burnt up in the muscles. He holds that both the pancreas and the muscles produce substances that are necessary for normal carbohydrate metabolism. He was led at first to the belief that these substances were of the nature of enzymes or ferments. According to this hypothesis, he held that the muscles produced a proenzyme which requires the action of another ferment, produced by the pancreas and contained in its internal secretion, before it can become active on carbohydrates. Later researches convinced Cohnheim that the activating body produced by the pancreas was really not a ferment. It withstood boiling and was soluble in 96 per cent. alcohol, but not

in ether. He consequently concluded that it was closely related in its characteristics to such other well-known secretions as adrenalin, iodothyrin, and secretin. An interesting feature is that an excess of this pancreatic product hinders, and when present in large quantities, absolutely prevents, carbohydrate combustion. Cohnheim suggests two explanations for this remarkable finding. The first is, that the pancreas produces two substances, one of which favors and the other hinders sugar combustion. For various reasons he sets this aside as a possible explanation. The second is based on the observation of Neisser and Wechsberg, that the destruction of bacteria by a bactericidal serum is due to the combined action of amboceptors and complement, and that an excess of amboceptors destroys the bactericidal action of the serum. By analogy, he suggests that by adding an excess of pancreas juice to a mixture of glucose solution and muscle juice, an over-abundance of amboceptors is provided, thus destroying the glycolytic action of the two juices.

Cohnheim's work seems to have pretty well withstood the attacks of various workers up to the present time. The claims of Claus and Embden that the sugar destruction was due to the effect of bacterial contamination seems to have been amply disproved. Rahel-Hirsch has confirmed Cohnheim's research. His observations would seem to show that tissues other than the muscles, for example, the liver, yield a substance which can be rendered active by the pancreas juice and then cause rapid destruction of glucose.

Cohnheim's researches undoubtedly have gone a long way toward solving the problem of the ultimate disposal of the carbohydrates in the normal individual. In combination with Opie's investigations they seem to afford a satisfactory explanation for the occurrence of the hyperglycaemia in diabetes. There seems little doubt but that the activating agent produced in the pancreas is a product of the islands of Langerhans. When these are destroyed, as they are in such a large percentage of diabetic patients, the substance produced by the muscles, and possibly other tissues, is not converted into the form which is necessary for it to be capable of burning up the glucose in the muscular tissues. Consequently, a hyperglycaemia, with more than 0.2 per cent. of glucose in the circulating blood occurs, and a transitory or permanent glycosuria ensues.

Although these investigations have thrown a flood of light on normal carbohydrate metabolism, as we shall later see, the problem is not a simple one, as the other ductless glands have been shown to have a marked influence on the warehousing of the carbohydrates in the system.

The Thyroid and Carbohydrate Metabolism.

Every observer who has had a wide experience with diseases of the thyroid gland has been impressed by the fact that in hyperthyroidism and hypothyroidism there is marked disturbance in the carbohydrate metabolism in many of the cases. F. Kraus, Ludwig, Chvostock, and others have observed that spontaneous glycosuria is not uncommon in exophthalmic goitre. Moreover, it has been shown that the administration of small amounts of carbohydrates in this condition often cause an alimentary glycosuria. In other words, in over-activity of the gland the tolerance for carbohydrates is reduced. Glycosuria in animals is not uncommon as a sequel to ether administration. Gray and De Sautelle have shown that when the thyroid is removed the amount of glucose put out in the urine, under the above conditions, is strikingly less, demonstrating that when the restraining influence of the thyroid is thus removed the pancreas is more efficient for carbohydrate metabolism.

On the other hand, in hypothyroidism, myxedema, the occurrence of spontaneous glycosuria is so rare as practically never to occur. Hirschl found that in an outspoken case of myxedema the administration of 200 to 500 grams of grape sugar did not produce alimentary glycosuria. This would seem to show that the tolerance for carbohydrates in this disease is increased 2 to 5 times. Knöpelmacher has confirmed these findings and has shown that the limit of sugar tolerance sinks to the physiological level as improvement takes place under treatment with thyroid.

King has recently conducted some interesting experiments which seem to adequately explain how the thyroid gland influences carbohydrate metabolism. Following the line of Cohnheim's experiments, he added together weighed amounts of crushed muscle, pancreas and dextrose. He then carried out three series of experiments. He first added a weighed quantity of normal thyroid gland and found that there was a decided lessening of the breaking down of dextrose by muscle and pancreatic juice as compared with the control. The same experiment was carried out with boiled thyroid with identically the same action as with the unboiled gland, *i.e.*, a very definite retardation. This showed that the substance is not a ferment, but is thermostabile in that it resists boiling. The next series of experiments was made with the active principle of the gland, the iodothyrin of Baumann, and revealed the fact that the retarding effect on the breaking down of the glucose was even more striking than when the whole gland was used. To use King's words, "These results therefore show that the thyroid gland influences definitely the carbohydrate-destroying mechanism of the body,

and render intelligible the clinical findings in myxedema and exophthalmic goitre. Increased activity of the thyroid we should expect from the above experiments to be associated with a decrease in the power of the carbohydrate-destroying mechanism, and such is clinically shown to be the case by the finding of glycosuria in Graves' disease."

"Decreased activity of the thyroid should, on the other hand, at least not diminish the power of the carbohydrate destructive mechanism of the body, and this view is rendered very probable by the rare occurrence of glycosuria in myxedema, and, in addition, by the extremely high assimilation limit for dextrose in this condition."

From the foregoing it will be seen that we have an example of the retarding action of the active agent of one ductless gland on that of another (it being taken for granted that the active agent of the pancreas is provided by the islands of Langerhans). It will be of interest, in this connection, to discuss at this point the noteworthy work of the members of the Vienna School, Falta, Eppinger and Rudinger, who have devoted especial attention to the study of the inter-relationship of the action of the ductless glands. They have correlated their results and have come to the following conclusions:

(1) The thyroid and pancreas mutually retard the action of one another.

(2) The pancreas and chromaffin system mutually retard the action of one another.

(3) The thyroid and the chromaffin system mutually increase the action of one another.

The Adrenals and Carbohydrate Metabolism.

Although clinical experience has given us little or no evidence from which we could draw the conclusion that the adrenals materially influence carbohydrate metabolism, yet laboratory experiments have adduced ample testimony that they do. In 1901 Blum reported that the subcutaneous injection of an aqueous extract of adrenalin produced glycosuria in 22 out of 25 animals experimented upon. Herter, in the following year, published the results of a series of instructive experiments in which he showed that the subcutaneous, intravenous and intraperitoneal injection of adrenalin chloride solution into dogs was almost invariably followed by glycosuria. He demonstrated that marked glycosuria followed the application of small quantities of adrenalin directly to the pancreas —quantities which when applied locally to other parts of the body either gave rise to no excretion of sugar or to a trivial glycosuria.

Zuelzer has shown that an antagonistic action exists between the adrenal secretion and the so-called internal secretion of the pancreas. He found that when normal blood was allowed to flow through the liver of a dog whose pancreas had been extirpated the sugar in the urine increased from 50 to 70 per cent., but this percentage was decidedly increased when the liver used was from a dog in whom suprarenal diabetes has been previously induced. He thinks that the internal secretions of the pancreas and adrenals react upon each other within the liver in such a way as to maintain the normal sugar elimination. When the pancreatic secretion is wanting, as in pancreatic diabetes, the unhindered adrenalin produces an increase in the sugar. When the function of both the pancreas and the adrenals was destroyed, glycosuria failed to occur. After the pancreas was removed and the suprarenal veins were ligated there was again an absence of diabetes. Zuelzer has experimented upon a very large number of pancreatectomized animals, and, except when the suprarenal veins were also tied off, glycosuria always followed. He is convinced that one of the most important functions of adrenalin is its effect on sugar metabolism in the liver. The adrenal and pancreatic secretions seem to be antagonistic in their action so far as carbohydrate metabolism is concerned.

Lépine, in working on a method of estimating the functional activity of the pancreas, in regard to both its internal and external secretions, has made some interesting observations which have a bearing on this interaction of the internal secretion of the two glands. It has been found that a weak adrenalin solution instilled into the eye of a pancreatectomized animal causes mydriasis. Fifty-five per cent. of the eighteen diabetics into whose eyes Lépine instilled adrenalin showed dilatation of the pupil; whereas, in thirty non-diabetic persons so tested only two showed dilatation of the pupils. The inference from these results is that in over one-half of the diabetics tested there existed, in all probability, some abnormality of the internal secretion of the pancreas, and consequently the effect of the adrenalin in dilating the pupil was not hindered. The test may, therefore, prove of value in helping to determine clinically whether we are dealing with a case of pancreatic diabetes or not. If, on instilling adrenalin solution into the eye, dilatation of the pupil results, we must be strongly suspicious that the islands of Langerhans are largely destroyed or functionally inactive.

The Pituitary Gland and Carbohydrate Metabolism.

One of the most important contributions to our knowledge of carbohydrate metabolism has recently been furnished by the brilliant researches of Cushing and his co-workers, who have shown

that the pituitary secretion has a remarkable influence on carbohydrate tolerance. Until a very recent date the hypophysis was believed to be a functionless structure. Cushing and his assistants, Crowe, Homans and Goetsch, have shown that complete hypophysectomy in animals is invariably fatal. Clinical observations and the knowledge acquired from surgical operations for diseases of the gland in man confirm these laboratory results. A thorough consideration of our knowledge of the influence of the gland on body growth, and the physiological action of pituitary extract, is beyond the scope of this paper. Consequently only those phases which have a more or less direct bearing on the subject under consideration can be dealt with.

A brief account of the anatomy of the gland will be of interest. Following the description of Herring, we speak of three divisions: the anterior lobe or *pars anterior;* the posterior lobe or *pars nervosa;* and the modified cellular structure derived from the anterior lobe, which surrounds the posterior lobe, and extends upwards along the stalk of the infundibulum—the *pars intermedia.* The anterior lobe is derived from the pharyngeal pouch described by Rathke in 1838, and is consequently of ectodermic origin. The gland is situated in the *sella turcica* and when normal is very small, its weight being 0.6 grams. The anterior lobe resembles the thyroid somewhat in structure. It is extremely vascular, the blood supply being derived most probably from branches of the carotids. The cells of the anterior lobe are classified according to their ability to take stains. Some are chromophile (either of the eosinophilic or basophilic variety) and the remainder chromophobe.

"In the *pars intermedia,* investing the posterior lobe, the cells are of a different type, without eosiniphilic granules, and it is here chiefly that one finds a tubular or acinous distribution of cells which have a tendency to secrete colloid, resembling in appearance the secretion characteristic of the thyroid gland. These cells are seen, under certain circumstances, actually to invade the *pars nervosa,* into which the product of their secretion is directly discharged, whence, as Herring first pointed out, it seems to pass through tissue channels towards the infundibular cavity, to find its way ultimately between the ependymal cells into the cerebro-spinal cavity of the third ventricle." (Cushing.)

The *pars nervosa* is composed of neuroglia and ependymal tissue, and serves probably to transmit the secretion of the *pars intermedia* and perhaps of the anterior lobe.

The researches of recent years have shown that pituitary extract possesses very powerful physiological properties. Oliver and

Schafer showed that it caused marked increase in the blood pressure from action both on the peripheral blood vessels and the heart. It is a powerful diuretic. Both these properties are attributable to the posterior lobe. Injections of extract of the anterior lobe cause an increase in temperature. Over-activity of the anterior lobe leads to gigantism if this occurs during the period of an individual's growth, and acromegaly if it occurs only after the usual period of growth is over. Absence or disturbances of the secretion produce the so-called "Froehlich's syndrome," described by this writer in 1901, and to which he gave the name *distrophia adiposa-genitalis*. It is characterized by small stature; amenorrhea, infantile genitalia, hypotrichosis, and an excessive deposition of fat. Cushing and his associates have reproduced experimentally an exact counterpart of this condition in hypophysectomized puppies.

It is only within the last few months that it has been definitely demonstrated that the posterior lobe of the gland has a most powerful regulating influence on carbohydrate tolerance. Although Marie first described acromegaly in 1886, it was not until 1889 that he pointed out its association with pituitary enlargement. Since that date numerous observations have shown that carbohydrate metabolism is materially disturbed in acromegaly. Out of 176 cases of the disease reported in the literature up to 1908, Borchardt found that glycosuria occurred in 35.5 per cent. of the cases. He conceived the idea that this glycosuria might be the result of a perversion of the pituitary secretion. He proceeded to demonstrate this experimentally by injecting extract of hypophysis obtained from men and horses into dogs and rabbits. In dogs, although after large doses of this extract glycosuria sometimes occurred, no uniform result was obtained. In rabbits, however, a glycosuria varying from the slightest trace of sugar to 4.2 per cent. occurred constantly. Two rabbits showed a hyperglycaemia. As a result of his experiments Borchardt was led to conclude that the glycosuria associated with acromegaly was possibly due to over-activity of the hypophysis.

It remained for Cushing and his associates, Goetsch and Jacobson, to solve the problem of the influence of the pituitary secretion on carbohydrate metabolism. They find that it is the posterior lobe that exerts this influence. For a few hours to a few days after removal of the posterior lobe of the pituitary gland they observed that there may be a temporary glycosuria or a lessened tolerance to ingested cane sugar. This is followed later by a great increase in the animal's tolerance to saccharose, so that the animal is capable of warehousing two or three times as much as was found to be its normal tolerance before operation. They are of the opinion that the

normal tolerance of animals and also of the human individual is dependent upon the effect of the pituitary secretion, which eventually reaches the circulatory blood. Cushing has shown that the secretory product of the posterior lobe of the hypophysis enters the cavity of the third ventricle by way of the infundibulum and becomes dissolved in the cerebro-spinal fluid, a medium which passes from the ventricle to the subarachnoid spaces and thence in all probability enters the blood stream by way of the dural spaces. That it is contained in the subarachnoid fluid he has repeatedly shown by causing a glycosuria or a lowered tolerance by injecting the fluid into dogs. The glycosuria or diminished tolerance just after operation is believed to be due to an increased amount of pituitary secretion being forced into the cerebro-spinal fluid by manipulation. The phenomenon is analogous to the increased symptoms which follow thyroidectomy after the operative treatment of exophthalmic goitre.

Cushing comments on the discordant results that different observers have found in the study of carbohydrate tolerance in acromegaly. Some have found, as already stated, an actual glycosuria; others only a diminished tolerance, and still others a decidedly increased tolerance. He is of the opinion that these discrepancies are entirely dependent upon the stage of the disease at which the case comes under observation. He holds that the adenomas or other tumors of the anterior lobe of the pituitary, which cause the characteristic features of acromegaly, also produce hyperplasia and overactivity of the posterior lobe in the early stages (hyperpituitarism), with the result that an excess of the secretion reaches the circulation and a lowered tolerance to carbohydrates ensues. In the later stages a hypoplasia with partial destruction of the posterior lobe and consequent lack of its secretion occurs, with the result that there is an increased tolerance to carbohydrates.

Clinical observation on cases of infantilism (hypopituitarism) in the human individual confirm the correctness of Cushing's theory. Since we know that this remarkable condition is due to absence of the secretion of the pituitary, we would expect the tolerance to carbohydrates to be markedly increased. Feeding tests with glucose prove this to be the case, for the patients can ingest 3 to 5 times the normal amount of glucose without glycosuria resulting. It should be emphasized here that in the experimentally produced infantilism of dogs the carbohydrate tolerance is also markedly increased. The deposition of fat in human infantilism, as well as that experimentally produced in dogs, is directly dependent on this increased tolerance to carbohydrates, and is probably due to lowered powers of oxidation in the tissues, with consequent conversion of the in-

gested carbohydrates into fat, instead of into their customary end products.

Cushing has shown that injection of pituitary extract into dogs causes regularly a glycosuria and the blood shows a hyperglycaemia as proven by quantitative analysis. He suggests the explanation that this hyperglycaemia and glycosuria may be due to the pituitary secretion causing an increased glycogenolysis in the liver. Whether this be the true explanation, or whether it be due to the pituitary secretion having an inhibitory action on the special internal ferment of the pancreas, remains to be demonstrated by further experiments.

It will be readily seen that these researches of Cushing and his pupils have a most important clinical bearing. "As polyuria is apt to be associated with these pituitary lesions, whether experimentally produced or the outcome of disease, a clinical picture readily mistaken for diabetes mellitus or insipidus may be present. It is not improbable, furthermore, that the temporary glycosurias following fractures of the base of the skull are induced by trauma of the posterior lobe or its infundibular attachment—glycosurias in other words which are comparable to and which follow on the operative manipulation of these structures." (Cushing.)

From the foregoing it is obviously apparent that the question of carbohydrate metabolism in health and in diabetes is a complicated one. Every year new light is being thrown on the problem. While positive proof that all cases of diabetes are due to disturbance of the normal function of the pancreas is still lacking, yet it is the conviction of the writer that eventually it will be shown that most, if not all, of the cases are due to absence of the special internal secretion of the pancreas or to interference or retardation of its function by the active principle of some one or other of the various ductless glands. Although, as yet, these researches have given us little assistance in the treatment of diabetes along the lines of organo-therapy, yet the writer is encouraged in the belief that the future holds out the prospect of encouraging results in this direction.

BRAIN TUMOR.

Graham Chambers, M.B., Toronto; Geo. A. Bingham, M.B., Toronto.

G. H., aged 17 years, admitted to Toronto General Hospital April 3rd, 1911.

Complained of:—

1. Headaches at night, which would disappear by ten the next morning.
2. Vomiting spells.
3. Failing eyesight.
4. Thick phlegm in the throat.
5. Pain in lumbar muscles.
6. A sound in the left ear when lying down, like blowing air across the mouth of a bottle.

The headaches began about January 6th, 1911, persisting up to the time of the operation. Vomiting started in about the same time, and persisted up to operation.

The failure in sight came on gradually about June, 1910, and has grown worse since January.

The sound in the ear dates back to about March 27th, 1911.

Family history negative.

Personal history.—Born in East London, England; sent to Fagan Home; put on farm when twelve years old; enjoyed farming until last place, where the farmer made him work hard, especially at night; would not let him have his eyes attended to; frequently went about with wet feet. Became ill on January 2nd last; confined to bed a couple of weeks. All through last winter had colds; expectorated thick phlegm, but did not sweat at night.

Jan. 2nd.—The patient got what he thought to be an attack of grip, which started with headaches. He complained of fullness in the head. Two days later he began to cough, felt feverish, with a very severe headache; had photophobia accompanied by vomiting, headache and visual disturbances. He felt very drowsy, and if he sat down for a few minutes would fall asleep.

March 15th to 20th.—Still felt drowsy and indifferent.

March 20th.—A rash appeared during the night and lasted four days. He was feverish and thirsty, had a loose cough accompanied

by blood-streaked sputum. On March 28th patient went out of doors, but the snow caused eyes to ache and headache. This illness was diagnosed measles.

March 31st to April 2nd.—Continued poorly. Vomited a half basinful of straw-colored fluid. His headache was relieved by vomiting. Vomited three times while dressing on April 1st. It was very difficult to stoop down to lace his shoes. When dressed he felt drowsy and had severe frontal headache. Felt weak in the legs and felt like falling forward, but not to one side or the other. After a little time was able to walk. Came to Toronto April 2nd, went to bed at 7 p.m., and vomited about a quart of coffee-like watery fluid. The attacks of vomiting came on suddenly with a good deal of retching, but the vomitus was not projected. Felt feverish and had a good deal of frontal headache. Felt better next day, but had slight headache.

Admitted to Toronto General Hospital.

Condition since admission:—

Has had headaches ever since, which came on after lying down, and which became less intense by rising and walking about the ward. These headaches felt as though there was a heavy weight inside trying to shove its way out and situated in the low frontal region and to some extent on both sides. Has not vomited since admission. The pain in the back has persisted ever since the attack of supposed grip. He does not notice it when walking, only when bending down or getting up from a chair. The blowing sound in the left ear has persisted ever since the attack of supposed grip and is more pronounced when he is lying awake at night.

Physical Examination.

On percussion of the head most pain is felt over an area the size of a fifty cent piece to the left of the median line and at the level of a line drawn upward, perpendicular to the zygoma, one inch in front of the external auditory meatus. The percussion note is higher pitched and shorter. Face and head are well formed, and two sides fairly symmetrical.

Nervous system.—Intelligence good; not emotional or irritable. No delusions nor hallucinations. Mental condition has not changed in the last year. Can read for about five minutes, after which time things become so dim that he can no longer read. When in the Home in England, while walking in his sleep, he fell, cutting his forehead. There is no paralysis of any group of muscles. There is rather a coarse fibrillar tremor of the tongue and of the extended fingers. There is no facial tremor when the muscles are tightly

contracted. Co-ordination of arms and legs good. Rhomberg's sign absent. When the patient stoops forward with eyes closed he does not tend to fall.

Cranial nerve reflexes.—First, normal; second, visual acuity poor, color sense good; Wernicke's sign absent; third, fourth and sixth, corneal reflex present, no squint, left eye projects slightly, no ptosis—there is nystagmus in every direction except when walking straight forward—pupils four m.m. round and equal, react to light and convergence, sympathetic reflex present, no diplopia present; fifth, normal, two-thirds of the tongue normal; seventh, no evidence of paralysis; eighth, blowing sound in left ear when lying down, hears watch on both sides, best on the right for air conduction—best on the left for bone conduction; ninth, taste apparently normal, pharyngeal reflex present; tenth, no evidence of paralysis; eleventh, trapesius contracts equally, when patient shrugs shoulders; twelfth, tongue protrudes straight.

Reflexes.—Plantar, flexor response; Achilles, absent; ankle clonus absent; knee jerks slightly exaggerated, but equal; patellar clonus absent; cremasteric present—plus; umbilical and epigastric present and increased; arm reflexes not exaggerated.

Examination of the eyes.—There is enlargement and blurring of the edges of both discs; veins are much enlarged and feel congested.

Fields of visions.—Left side of both fields obliterated; left eye has improved since admission.

Sensory.—Sensations for touch, heat, cold and pain are normal.

Nose and throat.—Normal.

The absence of basal symptoms except for involvement of the eighth suggests the sight of lesion as the left occipital lobe above tentorium. X-ray shows a shadow about two by one inch in the posterior half of the cerebrum. It cannot be seen in antero-posterior view.

White blood count, 11,000.

Wassermann and tuberculin, negative.

May 2nd.—Patient complained last night of terrible headache, just as though head were bursting open. This was localized to the left occipital area. Marked tenderness was present on percussion over this area. Morphia did not relieve the pain. Inhalations of amyl nitrite gave relief.

May 2nd.—Operation.—Dr. Bingham raised a flap from the scalp over the left occipital lobe. A plate of bone about two inches by an inch and a half was removed. The dura presented with some bulging. There was no pulsation visible. Dura mater re-

flected, whereupon the brain protruded very markedly. There was great tension present. Two probes were passed inward and forward, whereupon a few ounces of straw-colored fluid escaped. The opening in the brain was enlarged sufficiently to admit of the entrance of the little finger of the operator. A large cavity was thus revealed, the walls of which showed signs of disintegration. A blunt probe passed in to the bottom of the cavity showed a depth of about four inches. After the escape of the fluid, pulsation was noticeable in the substance of the brain, a drainage tube was introduced and passed out through a stab wound in the scalp flap. Scalp wound was closed by interrupted silkworm gut sutures. Moist bichloride dressings applied, and patient returned to the ward.

May 3rd.—Patient conscious and complaining of slight pain and tenderness in the site of the wound. Rested fairly well through the night. Vision appears to be somewhat improved. Only a slight reactionary temperature present. Pulse, normal, and of good quality.

MEDICAL THOUGHTS, FADS, FACTS AND FOIBLES.

By James S. Sprague, M.D., Perth, Ont.

As a Canadian by birth I have been for many years anxious to see the advent of a journal medical that would reach, and be read by, every fellow-practitioner, and to which the humblest and ablest men, as contributors, would be welcome, and in which would appear also notices of the world's progressive movements in medicine and such considerations as regard our professional interests and ethics in this our great Dominion, especially in these, our times, when fakerism, cults falsely named medical, and others, falsely termed Christian, are clamoring for legislative decrees and existence, and for rights to place mud gods—made by and with foul and dirty hands—in our very temples of learning, to the disgrace of civilization, to our well-established integrity and piety, and dishonor of the learned professions—more especially to medicine. To be hated and ridiculed their names need but be mentioned to thinking men; yet one has only to look over recent parliamentary enactments for proofs that we have a Legislature whose consideration and knowledge of delusive cults are not in keeping with their position as safe and wise guardians of the most vital interests of the State—and those interests principally relate to the public health and to the maintenance and protection of its universities, State or endowed; in fact, to all colleges or institutions honorably connected with them. Any qualified and lawfully licensed M.D. in this our country can become an oculist, ophthalmologist, optometrist, optician or retinoscopist, as his degree entitles him to such right.

The advent of a national journal is well known, but as its origin is due to interests associated with those of our Canadian Medical Association—to which each one of us gives our full praise—yet, to which every one of us should, but does not or ever will, give loyal support, and that its articles, however praiseworthy and bearing the evidence as fresh from the ink horns of professors, one fact is this: what we want, yes, sorely need, is a journal that reaches every M.D. in our Dominion, and to which the doctor from Plum Hollow and those from our great medical centres, lesser cities, towns and villages could, and should, contribute freely to its pages, and be not fearful that *McGill* and *Toronto* are in full control of medical journalism, for there are

other schools and other great universities to be born in our great Western Provinces, to which those named will bear, before the close of this century, such relationship that will be considered as secondary; where exist and will be born those the equals in gifts of Lord Strathcona—thus the necessity of a free table at which all may sup and discuss all interests purely medical—and in so doing our country's welfare, one license, one faith, and worship at one altar.

Our own well-established journals, more or less provincial, will exist, but many from necessity, as is the order and tendency of many United States journals, supported by drug concerns not ethical or ethpharmacal, will amalgamate with other journals, or for professional welfare, suspend publication—for our house-cleaning had better be done by *ourselves* and in a reasonable time, as patent medicines, and some we use, were publicly exposed by *Collier;* and medical colleges—so termed—were, when worthy, criticized—but Flexner's report tells the story—write to 576 Fifth Avenue, New York, and for one piece of silver equalling two dimes, learn, too, that *osteopathy* in the "Report" has, in some States, been associated with State Boards of Health—an amalgamation being sought after in *this* Province, but opposed by few journals that guard well our gates—and no alarm sounded by our new national journals or promised discussion at our meetings of the Ontario or Canadian Medical Associations.

The defeat of the "Optometry Bill" by our legislature presents evidence that in the Hon. Mr. Lucas we, and all patriotic men, have a champion—an opponent of close corporations—and his services have been deservedly named in one of our journals, yet, we notice not the objections of this our champion to the recent passage of legislative acts whereby a certain college secured incorporation, charter and powers to grant *B. Oph.*, *D. OPH.*, and "higher degrees" of licentiate and fellow.

It may be stated that there is no great demand by our people or by our profession for such colleges, as our medical colleges have taught, can teach, or could teach, if not, should teach, all subjects named in the calendar of said college; and members of our profession are, by right, entitled to engage in any specialty embraced in the many divisions or subdivisions named in calendar—if in practice, they are termed oculists, and are skilled in all that ophthalmology and optometry (refraction) teach, and have considerable understanding of the optician's work. If the M. D. has had several years in active practice, he, and he alone, is the safest oculist, provided he has selected, in association with general practice, such specialty, not for the money in it, but for his admiration and

adaptability for such work, and in which he will ever hold our profession's respect and not drift towards commercialism—the tendency of cults not recognized as purely professional, whose teachings are antagonistic to medicine, to our civilization, and all honest interests for the public health, of which we are too often the unpaid and maligned guardians.

SUMMARY:

With most encouraging promises of Dominion Medical Registration being realized, and at an early date, the necessity of a Medical Journal, in whose pages all universities would have equal and honorable mention, and all licentiates become subscribers—is apparent to all well-wishers of our profession, who also desire medical journalism shorn of unworthy advertisements, so noticeable in our own, and especially in American journals, of which we have more subscribers and more contributors than to our own journals. Yes, we want, in addition to our Provincial journals—one DOMINION MEDICAL JOURNAL, whose subscription is within reach of every Canadian M.D.

As the publication of one's views medical in the public press has never, and probably will never, add any honor to medicine or to self, it were better that our JOURNAL have it, but if the public and not self-interest warrant a re-publication, such the daily press should have. Would it not have been deserving of our work had we given to the public press some of the views of journals concerning optometry, ophthalmology, osteopathy, Emmanuel movements, the "science" that is not science, "Christian" yet not Christian, etc. Our profession demands that each of its honorable disciples shall, in a public and professional sense, become its brother's keeper; if so, we are to teach our legislators and public that cults—so-called, and as baseless as dreams—given birth in States—

"Where the corn is full of kernels,
And the Colonels are full of corn,"

can not thrive, or be tolerated, in this our country, where the profession of medicine cherishes its history and its high ideals, and those of the British Isles,—hence our title, or degree, of *Doctor,* honorably acquired, and the profession it usually names—are worth preserving, unless socialism is rampant.

You and I brother, know too well that there are those who neither understand things of themselves nor when we explain them

—and to them—and we are meeting daily with those of whom the Arab proverb says:—

"The man who knows not that he knows not aught—
He is a fool; no light shall ever reach him.
Who knows he knows not, and would fain be taught—
He is but simple; take thou him and teach him.
"But whoso knowing, knows not that he knows—
He is asleep; go thou to him and wake him.
The truly wise both knows, and knows he knows—
Cleave thou to him, and nevermore forsake him."

Thus, we, whose profession is learning, and how to live, and instructing us to teach that others may teach and learn, how we may live and others, may or should live—have learned, and are learning, the lesson of service, and that service is the *public health,* and "to the physician more than the priest or minister, in this age, the mind-weary and mind-distressed appeals,"—if such is the truth, why not we protect our profession, since this age is that "of reason in religion and in medicine"?

"Let us have an end of this creation of osteopathists, optometrists, etc., etc. Legislators owe it to their constituents to protect them from this farce," says *Canada Lancet*, and endorsed by every M.D. in this or any country—provided he has respect for his profession, and our universities.

"With malice towards none, with charity towards all, with firmness in the right—and we sustained by steadfastness of purpose—let us strive to finish the work we are in," said the immortal Lincoln.

THE HOUSE OF COMMONS OF CANADA—BILL 15.

AN ACT TO AMEND THE CANADA MEDICAL ACT.

(Reprinted as amended and reported by the Select Committee to which it was referred.)

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

1. Paragraphs (*c*) and (*d*) of section 2 of The Canada Medical Act, chapter 137 of the Revised Statutes, 1906, are repealed and the following are substituted therefor:

"(*c*) 'University' shall mean any university which has a teaching medical department in connection therewith, and has the power to grant medical degrees;

"(*d*) 'Medical school' includes any institution recognized by a provincial medical council wherein medicine is taught."

2. Paragraphs (*c*) and (*e*) of section 5 of the said Act are repealed and the following is enacted as paragraph (*c*) of the said section:

"(*c*) The determination and fixing of the qualification and conditions necessary for registration, the examinations to be undergone with respect to professional subjects only, and generally the requisites for registration: Provided that the council shall not determine or fix any qualifications or conditions to be complied with as preliminary to or necessary for matriculation in the study of medicine and for the obtainment of the provincial licenses, these being regulated as heretofore by the provincial authorities."

3. Subsections 1 and 3 of section 7 are repealed and the following are substituted therefor:

"7. The Council shall be composed of:

"(*a*) Three members who shall be appointed by the Governor in Council, each of whom shall reside in a different province; but until such time as the Provinces of Saskatchewan, Alberta and British Columbia shall have been entitled to university representation, two of the three members so appointed shall be chosen from two of these provinces;

"(*b*) Two members representing each province, who shall be elected under regulations to be made in that behalf by the provincial medical council;

"(c) One member from each university or incorporated medical college or school in Canada having an arrangement with a university for the conferring of degrees on its graduates, engaged in the active teaching of medicine, who shall be elected by the university or by such college or school under such regulations as may govern in that behalf;

"(d) Three members who shall be elected by the homeopathic practitioners in Canada, each of whom shall reside in a different province."

4. Subsections 1, 2, 3 and 4 of section 8 of the said Act are repealed and the following are enacted as subsections 1 and 2 of the said section:

"8. The term of office for members shall be four years.

"2. Any member may at any time tender his resignation by written notice thereof to the president or to the secretary of the council, and, upon the acceptance of such resignation by the council the council shall forthwith give notice in writing thereof, in case of an appointed member, to the Secretary of State of Canada, and in case of an elected member, to the secretary of the medical council for the province, or to the university, incorporated medical school or college, or if a representative of the homeopathic practitioners resigns, to the remaining homeopathic representatives upon the council.

5. Sub-section 2 of section 10 of the said Act is amended by striking out the word "twenty-one" in the second line of the said sub-section and substituting therefor the word "eleven."

6. Paragraph (b) of sub-section 1 of section 11 of the said Act is repealed and the following is substituted therefor:

"(b) The summoning and holding of the meetings of the council, the times and places where such meetings are to be held, and the conduct of business thereat."

7. Paragraphs (g) and (h) of the said sub-section 1 of section 11 are repealed and the following are substituted therefor:

"(g) The establishment, maintenance and effective conduct of examinations with respect to professional subjects only, for ascertaining whether candidates possess the qualifications required; the number, times and modes of such examinations; the appointment of examiners; and generally all matters incident to such examinations, or necessary or expedient to effect the objects thereof;

"(h) The admission to examination of holders of diplomas obtained outside of Canada from a medical school recognized by the council."

8. Paragraph (a) of section 12 of the said Act is repealed and the following is substituted therefor:

"(*a*) No candidate shall be eligible for any examination prescribed by the council unless he is the holder of a provincial license, or unless he presents a certificate from the registrar of his own provincial medical council that he holds a medical degree accepted and approved of by the medical council of the said province."

9. Section 14 of the said Act is repealed and the following is substituted therefor:

"14. The Council shall make such regulations as shall secure to homeopathic practitioners, and to all applicants for registration who desire to be practitioners of the homeopathic school, rights and privileges in respect of registration by the council not less than those now possessed by them under the laws of any province, and under the regulations of the provincial medical council thereof."

10. Section 16 of the said Act is repealed and the following is substituted therefor:

"16. The subjects of examination and the eligibility of candidates shall be decided by the council, and candidates for examination may select to be examined in the English or French language. A majority of the committee conducting the examination of any candidate shall speak the language in which the candidate elects to be examined;

"2. Examinations may be held only at those centres at which there is a university or college actively engaged in the teaching of medicine or having hospital facilities of not less than one hundred beds."

11. Sub-sections 2 and 3 of section 18 of the said Act are repealed and the following is enacted as sub-section 2 of the said section:

"2. Any person who has received a license or certificate of registration in any province previous to the date when the council has been first duly constituted under this Act, and who has been engaged in the active practice of medicine in any one or more provinces of Canada, shall, after ten years from the date of such license or certificate, be entitled to be registered under this act as a medical practitioner, without examination, upon payment of the fees and upon compliance with the other conditions and regulations for such cases prescribed by the council: Provided that if the medical council of any province is not satisfied with the period of years prescribed by this sub-section, such medical council may, as a condition to provincial registration, exact an examination in final subjects from practitioners registered under this sub-section, and the said examination shall be held according to the provisions of the by-laws or rules of the respective provincial councils."

12. The said Act is amended by adding thereto the following section:

"24. No amendment to this Act may be proposed on behalf of the council unless previously accepted by the provincial medical councils."

13. This Act shall not come into force until the legislatures of all the provinces have enacted legislation accepting its provisions: Provided, however, that the medical board of any province may at any time order the withdrawal of the representation of the said province upon the council, by a resolution passed at a general or special meeting of the said board called for the purpose and carried by the votes of two-thirds of the members present at the said meeting, and notice of which resolution has been inserted for three months previously in *The Canada Gazette*; and in case of such resolution being passed the provisions of this Act shall immediately cease to apply to the said province and no more persons shall be given the right to practise medicine within the jurisdiction of the said legislature by reason of their qualification or registration under this Act.

Dysmenorrhea.

Drenkhahn (*Zentralblatt für Gyn.*) has employed 1 m. atropine dissolved in 1 c.c. of water, injected into the cervical canal in quite a number of cases of dysmenorrhea, arresting at once the spasms of the uterus or preventing their development. The same effect may be got by applying a small cotton wad with a one per cent. solution of atropine against the posterior wall of the vagina. He adds, this simple application may cure a tendency to dysmenorrhea if there are no morbid changes in any of the genital organs.

Lobar Pneumonia.

Matheson (*B. M. J.*) reports the treatment of twenty cases with a combination of creosote and potassium iodide. There were no deaths and four cases aborted. As soon as the diagnosis is established, he gives the following prescription: Potassium iodide, one drachm; creosote, one-half drachm; rectified spirit, two drachms; liquid extract of liquorice, three drachms; water to six ounces. A tablespoonful to be taken every four hours.

Obstetrics

Chas. J. C. O. Hastings, Arthur C. Hendrick.

The Question of the Narrow Pelvis. By Sir J. Halliday Croom, M.D. (Edin.), *Birmingham Medical Review.*

The paper is a review of the modern treatment of labor in a narrow pelvis.

The most usually recognized treatment of narrow pelvis at the present time is, except in some hospitals, the application of *high* forceps or version, or induction of premature labor.

Owing to antisepsis the danger of high forceps delivery is not now so great, but still it is questionable if a patient ever fully recovers from such treatment, however skilfully done.

The first essential in the treatment of narrow pelvis is a correct diagnosis, made early. This is obtained by pelvimetry and abdominal palpation.

Whenever the true conjugate is two to three inches delivery per *vias naturalis* of a living child is impossible and Cæsarean section is the only treatment. In less contracted pelvis, where spontaneous delivery may occur, *i.e.*, in conjugate area $3\frac{1}{2}$ to $3\frac{3}{4}$ in. Here forceps, or turning or premature labor has been advocated, but Sir Halliday Croom states quite truly that over 80% of such labors will terminate without any interference whatever. Therefore they should be left to nature. The fœtal mortality is also low, .2%. Hence the number of such cases requiring artificial aid is small.

What are the limits of pelvic contraction that admit of spontaneous delivery in narrow pelvis? In degrees of contraction slightly under $3\frac{1}{2}$ in. for *flat*, and $3\frac{3}{4}$ in. for generally contracted pelvis, spontaneous delivery may be readily looked for. Hence our duty in such cases is to trust to nature, and aid her by the Walcher position. This is maintained by placing the patient across the bed, with the side of the bed raised on blocks, and letting the legs hang over the edge.

As regards the intermediate position, *i.e.*, between Cæsarean section and spontaneous delivery: Here we have induction of premature labor, forceps operations for enlarging the pelvis.

Premature labor is safe for the mother, but gives 30% mortality for the child. Symphyseotomy is dangerous also for the child. So Cæsarean section is safer. The cutting operation is only to be thought of in high forceps above the brim.

All these cutting operations are matters of option—when the head is unengaged at the brim. Hence, in conclusion, one has:

1. Cæsarean section for greatly contracted *pelvis vera conjugatæ* 2—3 in.

2. Spontaneous delivery for true conjugate of about 3½ in. aided by the Walcher posture.

3. Premature labor, high forceps, symphyseotomy, pubiotomy, or Cæsarean section for the intermediate condition.

A. C. H.

Urethral Stricture.

Goldenberg (*Zeit. für Chir.*), under considerable pressure, injects 20 c.c. of glycerine in impermeable urethral stricture, which then permits the catheter to find its way through.

Rodent Ulcer.

Churchward (*The Lancet*) says that calciophosphate of uranium possesses great radioactivity and may be substituted for radium bromide in the treatment of rodent ulcer. He covers the ulcer with a piece of lint, over this the mineral is placed, where it is allowed to remain for three hours each day. It is inexpensive and simple.

Tuberculosis.

Spengler (*Mün. Med. Woch.*) claims to have cured fifteen patients of tuberculosis by artificial induced pneumothorax. By this collapse therapy it is considered that with careful selection of cases excellent results may be obtained.

Infantile Diarrhea.

Stark (*Practitioner*) says that for diarrhea and sickness of young children salicylate of sodium is almost a specific. He gives two grains to a child of nine months, repeated every 2 to 4 hours according to the severity of the disease. It is made palatable with saccharine and chloroform water. Vomiting ceases early, stools become less offensive and less abundant, and there is no after-constipation.

Ophthalmology

D. N. Maclennan, W. H. Lowry.

The Antagonism of Eserine and Atropine. *Ophthalmoscope*, April, 1911.

Stanculeanu and Rasvan, of Bucharest, have experimented to ascertain the facts of the antagonism of eserine and atropine. Eleven persons received two drops of 1 per cent. atropine solution. In 6 to 10 minutes the pupil began to dilate and the maximum was reached in 15 to 20 minutes. The pupil contracted to normal in 7 to 14 days. Half per cent. solution of atropine was placed in the eyes of seven persons. Dilatation began in 6 to 10 minutes. Complete mydriasis was attained in 15 to 25 minutes. Six to nine days elapsed before the effect went off. One-fifth per cent. solution acted just as quickly, but the pupils became normal again in from 60 to 184 hours. A drop of oily solution of eserine reduced this time to from 60 to 120 hours. These observers found out that the antagonism was very little, and they concluded that eserine only controlled atropine for a very short time, and that the atropine soon regained the mastery. Similar experiments with homatropine showed that the eserine reduced the period of action of homatropine from 36 to 60 hours to 20 to 50 hours. W. H. L.

The Non-Surgical Treatment of Cataract. *Ophthalmoscope*, April, 1911.

Louis D'Or, of Lyons, has become a firm supporter of the method of treating incipient cataracts by means of locally applied drugs. His investigations have been based upon the theory, that a hydrating ferment is obtained in the aqueous humor from the blood, and this ferment determines the hydration of the albumens of the lens.

He uses in an eye-bath the following solution:—

Desiccated sodium iodide	5 grms.
Crystallised calcium chloride	5 grms
Distilled water	400 grms.

The uncovered cornea is exposed to this solution, which is warmed, for half an hour each day. D'Or says that with this solution one can check the progress of at least eight cataracts out of ten, can cure one, and can expect failure in the tenth. W. H. L.

Reviews

A Text-Book of General Bacteriology. By Dr. E. O. Jordan, Professor of Bacteriology in the University of Chicago and in Rush Medical College. Published by W. B. Saunders Company, Philadelphia and London.

The author in the second edition of this book has added several new sections which brings it well up-to-date. A general introduction to the various branches of bacteriology is presented, followed by the study of the various pathogenic bacteria in detail. The chapters on immunity, the pathogenic anaërobes and the pathogenic spirilla are well written. The important bibliographical references are given in the text bearing on the various subjects under discussion. The book is well illustrated by drawings and photographs. To students of bacteriology, especially those in medicine, this work should prove extremely valuable. O. R. M.

The Wassermann Sero-Diagnosis of Syphilis in Its Application to Psychiatry. By Dr. Felix Plant. Authorized translation by Jelliffe and Casamajor. (Nervous and Mental Disease Monograph Series, New York, 1911. $2.00. Pp. 188.)

This book is another welcome addition to a valuable monograph series. Dr. Plant is without rival as the leading authority in the world on the subject of sero-diagnosis in psychiatry, and he has put his best work into this book. He gives first a historical account of the matter, a comparison of the different methods in practice, and a careful study of the technique of the reaction. The rest of the book is taken up with a description of clinical investigations, a summary of the diagnostic value of the reaction, with a chapter on the influence of mercury treatment. The book can be warmly recommended as an authoritative exposition of our present knowledge on the subject. The translators are to be congratulated both on their selection and the excellent way in which they have performed their task. E. J.

La Psychologie de l'Enfant. By Prof Ed. Claperede. 4th edition. (Kündig, Geneva, 1911. Pp. 471.)

In this edition the author has greatly expanded and largely rewritten his well-known volume on child psychology. It stands as

quite one of the best on this subject. The problems are carefully discussed from a scientific aspect, and expounded in a specially lucid style. For to those who wish to acquaint themselves with this important branch of psychology and education no better book could be recommended. E. J.

THERAPEUTIC NOTES

VARICOCELE.

Nilson (*Zent. für Chirg.-Leipsic*) gives his technic as follows, having operated in sixty-five cases: "The stumps of the vein are drawn such a distance apart that there can be no question of regeneration of the blood canal later, while the testicle is safely suspended from the internal abdominal muscle. The long, lower stump of the vein is drawn through behind the lower fibres of the common aponeurosis of the internal and transverse oblique muscles which are separated from the front of the rectus without disturbing the lay of the fibres or cutting them. The operation requires fifteen minutes to complete and is done under local anesthesia.

TIC-DOULOUREUX.

T. H. Weisenburg (*Ther. Gazette*) has had unfailing success with deep alcohol injections in the treatment of tic-douloureux. He employs Patrick's method of injection. A solution of 85 per cent. alcohol is used with 4 grains of cocaine to the ounce. He injects 2cc. In subsequent injections 90 per cent. alcohol is used.

COLDS.

The following ointment for colds of the throat, nose or chest, applied warm with warmed hands, rubbing well in over the bridge of the nose, throat or chest, is recommended by the Medical Council: —Mutton suet, lard, aa 1 teacup; gum camphor, ¼ to ½ ounce; spirits turpentine, ammonia water, mild, aa 3 tablespoonfuls; oil nutmeg, tablespoonful. The tallow and lard are put on stove until hot; gum camphor is then added. When dissolved take from stove and let cool a little, then add the rest of the ingredients and beat until cold. Keep in jars.

Dominion Medical Monthly

And Ontario Medical Journal

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Rhinology, Laryngology and Otology: Geoffrey Boyd, Gilbert Royce.
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COMMENT FROM MONTH TO MONTH.

The Ontario Government, perhaps, better, the Provincial Secretary, is to be congratulated upon the recent promotions in the Hospital for the Insane service. We have seen the last, let us hope, of the doctors in politics, pitched into the offices of superintendents of our institutions which have for their aim in life the care and welfare of the insane. We have never had any quarrel with the doctor in politics. What we have for years objected to was the appointment of the doctor in politics to the head of these institutions over well-tried, trained assistants. The evil was abominable and derogatory to the service; it was nauseous to the medical profession; it was, worst of all, harmful to psychiatry. The interests of the inmates always seemed the last desideratum. It has been a long time a-coming; it has come. May it stay forever.

The Meeting of the Ontario Medical Association at Niagara Falls was one of the best in its history. The attendance reached almost the three hundred mark, the addresses were of first order, the papers numerous but mostly good, the entertainments delightful and a general feeling of goodfellowship pervaded the entire convention.

The president proved a very popular one at the helm. A capi-

tal presiding officer, he was always urbane, business-like, with a keen edge on his authority. The secretary had his work well in hand and makes a first-rate man for the position.

Holding a meeting at Niagara Falls was a new idea, and many feared for the success of the meeting. That is to be feared no longer—the meeting-place is an ideal one. It should be used as such oftener.

In these pages we have often advocated meetings of our association at such points, and now that a commencement has been made we may look forward to meeting there again or at the Royal Muskoka, where at hand will be the Sanataria at Gravenhurst to visit, inspect—and hold clinics. We will venture to throw out the suggestion now that the meeting of 1913 be held in that locality.

There is an advantage in meetings in such places other than the holiday outing. It gives the association a chance to confer the honor of the presidency upon outside men, and so not all the time conferring that honor upon men from the larger places. The opportunity of meeting, too, almost exclusively in a summer resort, where the entire establishment is at the disposal of the association, is one not to be lost sight of.

That there are too many papers presented at our association meetings must be a fact quite patent to all. Fewer papers, better selected by the Programme Committee, would allow of more time for reading a good paper right through, broader and better discussions and generally better work. Then, too, there would be less crowding and more time for the transactions of the general business affairs of the association than at present. It always seems as though there was not just enough time for general business.

Dr. Herbert A. Bruce was the choice for president for the coming year. His wide popularity will ensure a record-breaker for 1912.

The Ophthalmo-Diaphanoscope is an instrument recently devised and improved by Dr. Carl Hertzell, of Berlin, to supplement ophthalmoscopic examination. The principle is to illuminate the eye by means of a powerful light of eighty candle power, held in the back of the oral cavity. To prevent burning by the intense heat from the light, the light bulb is enclosed in another glass bulb, and the intervening chamber is filled with water, which is kept running continuously through the chamber by an ingenious contrivance. An opaque mask is worn over the patient's face, leaving openings over the pupils of each eye. The view one gets is alto-

gether different from that one gets with the ophthalmoscope, for it shows the transparency of the coats of the eye and the media, and will thus reveal detachments of retina, retinal and choroidal exudates, sarcomata, foreign bodies, etc. One can see the outlines of the optic disc, the optic nerve, and pigment about the disc. He can look from one eye to the other instantly, and can thus compare the two. In this way an optic neuritis was recognized. By means of an appliance the same light can be made use of as a transilluminator. Nor are its uses limited to the examination of the eye, for the instrument has been used to illuminate the antra, the sinuses, in gynecological work and cystoscopy. W. H. L.

To Dr. H. G. McKid, Calgary, Alta., we offer our hearty congratulations at being elected to the high honor of President of the Canadian Medical Association.

News Items

Ottawa has had thirty-four cases of smallpox with one death.

Drs. Charles and Brefney O'Reilly, Toronto, sail for England in July.

Dr. J. C. Mitchell becomes Superintendent of the Brockville Hospital for the Insane.

McGill is to receive an additional $100,000 from Lord Strathcona for its new medical building.

His Excellency Earl Grey laid the corner stone of the new Montreal General Hospital early in June.

Dr. J. T. Fotheringham, Toronto, is the Medical Officer with the Canadian Coronation Contingent.

The new medical buildings of McGill University, Montreal, were opened by His Excellency, the Governor-General on the 5th of June.

Dr. Wilfrid Grenfell, the Labrador missionary and explorer, has received the degree of Doctor of Laws from the University of Toronto.

The McGill medical re-union, held in Montreal the second week in June, proved a pronounced success, 520 being present at the banquet.

Dr. Roger Doyen, son of Prof. Doyen, Paris, France, is in Montreal establishing a dispensary for the treatment of cases of tuberculosis.

Dr. T. B. Richardson, Toronto, has been placed in command of No. X Field Ambulance, Lt.-Colonel Fred Fenton, M.D., having resigned.

Dr. Geo. E Armstrong, Montreal, has been appointed Chief Surgeon at the Royal Victoria Hospital, in succession to the late Dr. James Bell.

Drs. R. A. Reeve and A. B. McCallum, Toronto, and Dr. John Stewart, Halifax, have received the degree of Doctor of Laws from McGill University.

Medical practice for sale in country near London. Collections $2,200 annually. House and stable. Price, $1,500. $500 cash. Apply this office.

Dr. A. Howard Pine, from St. Bartholomew's Hospital, London, England, has been appointed X-Ray Medical Specialist at the Royal Victoria Hospital, Montreal.

Dr. J. M. Forster, formerly of Mimico, London and Brockville Hospitals for the Insane, has been appointed Superintendent of the Toronto Hospital for the Insane.

The Toronto Board of Health has issued its first regular monthly bulletin. It is full of good information for the general public, and arrangements should be made with the public press to reprint in full as issued.

The Ontario Medical Association will ask the Canadian Medical Association to so amend the By-laws of the national organization to provide for admission into the latter only through a local or provincial association.

Kingston Medical Association urges the Minister of Education to appoint qualified medical men and experienced teachers to give instruction in Normal and Model Schools on the physical and mental examination of school children.

Montreal General Hospital house staff for ensuing year will be: Drs. Ower, Robinson, W. G. Hepburn, H. H. Hepburn, O'Callaghan, McNaughton, McGibbon, Falconer, Moore, Copeland, Standbury, Bauld, Clouston, Shannon, A. D. Campbell and Furness.

Officers of Ontario Medical Association: President, H. A. Bruce, Toronto; Vice-Presidents, Drs. F. W. E. Wilson, Niagara Falls; Wm. Hall, Brampton; F. P. Drake, London; George H. Field, Cobourg; Treasurer, Dr. J. H. Mullin, Hamilton; General Secretary, Dr. F. A. Clarkson, Toronto.

Dr. Casey A. Wood, Chicago, has presented to the McGill Medical Library a magnificent collection of rare works on diseases

and surgery of the eye. Dr. Gordon Byers, Montreal, has added 2,500 valuable reprints on ophthalmology, whilst Dr. Osler and Sir Lauder Brunton have recently donated some choice engravings for the new home of the library.

Dr. Barker, Baltimore; Dr. Councilman, Harvard University; Hon. Dr. Young, British Columbia; Dr. E. P. Lachapelle, Montreal; Dr. John Warren, Harvard University, and Dr. A. L. Smith, Dean of the Faculty of Medicine, University of Pennsylvania, received the degree of Doctor of Laws recently from McGill University.

The attention of our readers is directed to the advertisement of Dr. McBride, St. Catharines. Dr. McBride has had a long and successful experience in the treatment of the liquor habit, has a well equipped and comfortable institution in St. Catharines, and will be pleased to send terms and literature to any one upon application. His address is 6 Yate Street.

There is to be established in Toronto in the immediate future a fine new private hospital to be known as the Wellesley Private Hospital. It is to accommodate from sixty to one hundred patients, and Dr. J. N. Elliott Brown is said to have received the appointment of Superintendent. An operating theatre of the most modern character will be a feature of the institution.

At the annual dinner of the Ontario Medical Association, held in the Clifton Hotel, Niagara Falls, Ont., on the evening of the 31st of May, Dr. Casgrain presided, and Dr. Wilson, Niagara Falls, was toastmaster. Dr. J. B. Coleridge, Ingersoll, although brought into the breach at the last moment, made a splendid speech in reply to the toast of Canada. Drs. Roswell Park, Buffalo, and Dr. Woodruff, Chicago, responded for the American profession, the former reading an epitome of a nencyclopedic article on the early medical profession of America. Drs. A. McPhedran and R. W. Bruce Smith replied for the Canadian medical profession.

Dominion Medical Monthly

And Ontario Medical Journal

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Original Articles

PRESIDENT'S ADDRESS, ONTARIO MEDICAL ASSOCIATION, 31st MAY, 1911.

By H. R. Casgrain, M.D., Windsor.

Members of the Ontario Medical Association,—I must thank you sincerely for the honor you have done me in electing me, for two consecutive years, to the highest office in the gift of this association. I wish, further, to thank those who have labored with me in the work of the association, at the sacrifice of much valuable time and the expenditure of no small amount of effort, in order to make these annual meetings a success. We have to present to you this year a rich and varied programme for a portion of which no small thanks is due our medical brethren of the great neighboring republic. To them I extend a hearty welcome from this association. They are, in reality, part and parcel of ourselves, inasmuch as medicine recognizes no national boundary. In extending to them the invitation to address us, we recognize the great work that is being accomplished in the domain of medicine and surgery in the United States.

In reviewing the progress of medicine for the past two years, we note that while the results of research and observation on internal diseases have presented little that can be called spectacular, much of practical importance has been accomplished, and at least one or two striking discoveries have been announced. Within the time under consideration we have the vaccine method of treating typhoid fever. It is probably too soon to pronounce as to the merits of this mode of treatment, yet, according to Anders (*Jour. Amer. Med Assoc.*, Dec. 10, 1910), the value of vaccine for the following purposes must be

conceded: (1) As a means of prophylaxis; (2) in suitable cases when continued during convalescence, to prevent relapses; (3) to combat local infections with the typhoid bacillus, as, for example, bone suppurations which arise in the period of convalescence; (4) for the removal of typhoid bacilli from the feces and urine in the case of typhoid carriers.

Syphilis.—During the past year numerous papers dealing with salvarsan, generally known as "606," have appeared. This is probably the greatest discovery that has taken place in the domain of medicine for probably the last decade. The papers published in regard to its effects have been numerous and optimistic. Granting that the tone of medical opinion has been too optimistic, there yet remains little doubt that remarkable results will be obtained from this mode of treatment.

It would require too much time to enumerate in detail the progress that is being made in the various branches of medicine. While, as has been said, the past two years have, with possibly the two exceptions noted, not been productive of any startling discoveries, they have been years of activity in the line of medical research.

Progress in surgery depends, to a large extent, upon the earliest possible recognition of the surgical lesion and the technique of its treatment. The early recognition of the surgical lesion is really more of a medical problem than it is surgical. This, in itself, constitutes a problem of no small magnitude, inasmuch as it includes the education of the public. The laity must be informed, to a certain extent, in regard to the signs and symptoms of those diseases for which at the present time they do not seek the advice of their family physician, the general practitioner. The results obtained by associations organized for the study and prevention of tuberculosis show the value of a propaganda for public instruction along these lines. The surgical diseases about which the public should receive instruction are numerous. The first dressing of a wound is one of the most important factors in the prevention of infection. Incipient cancerous lesions, especially when located upon exposed mucous membranes of the skin, are apparently insignificant—so much so that very few persons seek professional advice before the lesion has grown and has reached a stage of lymphatic involvement. Women should be educated in regard to the possible significance of uterine hemorrhage, if the results of operation for cancer of the uterus are to be improved. Side by side with this education of the public must progress the education of the general practitioner in the recognition of the earlier signs and symptoms of surgical lesions.

The technique of treatment has been designated the second factor in the progress of surgery. The surgical treatment which promises the best immediate and permanent results in the largest number of cases must be undertaken earlier, and must depend upon a more accurate diagnosis. The earlier the treatment is instituted the more difficult is the subject of diagnosis. In order to attain the requisite skill in diagnosis the surgeon must study not only his own results, but the results of his colleagues throughout the world. A fortuitous trend of the times is the greater tendency for surgeons as well as physicians to spend time at post-graduate work and in attending upon the clinics held in the larger centres of population. This tendency is bound to lead to better days in both medicine and surgery.

I wish to emphasize the importance of greater solidarity in the organization of the Ontario Medical Association. I am firm in the belief that this association should preserve its autonomy. There should be a more intimate relation between the provincial association and the county associations. A requirement for membership in the provincial organization should be membership in good standing in the local society. This will improve the personnel of the Ontario association. The members of the local society are in much better position to judge as to the professional and social standing of applicants for membership than is this association and, furthermore, qualification for the Dominion Medical Association should depend upon good standing in the provincial association. Such procedure would go a long way towards making the medical profession of the Dominion a united body, able to accomplish all that can be accomplished by unity of action. I hope soon to see the day when this matter will be considered seriously, and when the provincial and local societies will prove a greater stimulus to each other than in the past.

This province has enjoyed a reputation for its high standard of entrance upon the study of medicine. The standard should be still further advanced. In the first place, we should have a uniform entrance as well as graduation standard for all candidates who would practice medicine and surgery. The minimum of matriculation should be a degree in arts from a recognized university, and such degree should be required to include special work in the natural sciences and modern languages, and also Greek, inasmuch as this latter language is the international language of science, and especially medicine.

I further hold it that osteopaths and homeopaths should be required to take the same examinations as regular candidates. The

only exception being modes of treatment, except surgical, for which all should be required to pass a uniform examination.

We have this spectacle—of two or three defunct universities with representation on the Ontario Medical Council Board. This should not be. Only those institutions actively engaged in the teaching of medicine should be represented on the Ontario Medical Council.

Some overzealous friends of the provincial university have urged the claims of that institution that its graduates be granted license to practice upon the presentation of their graduation diplomas, without further examination. I am utterly opposed to this. Not that I have any ill-feelings against the medical department of the University of Toronto, which I consider one of the best on the continent, but I consider such action would be unfair towards the medical department of Queen's University and the Western University, both institutions of which have been strong in their endeavors to uphold the standards of medical education in this province.

Medicine, let me repeat, is a science of practical utility. It found its origin in the necessity of relieving human misery. It was, at its birth, but a simple and rude empiricism. When we behold that to-day, with the most rigorous and exact methods, that the natural sciences can place at our disposal when we contemplate that our scientific efforts have already won a well-attested success, by means of incorruptible statistics when we realize by what means medicine is now able to protect the life and health of the individual, and how it can save a whole continent from the ravages of epidemics when, in fine, our hearts may, with just pride, exult at this noble conviction—that no other science is as generous and as altruistic as that of medicine. It is not the solemnity of this moment, it is not the eclat of this meeting, that force me to make the assertion that each of our confreres and collaborators, the youngest as well as the most modest, even he, whose name is yet unknown, and who seeks in the seclusion of a laboratory the thread of a truth, the solution of a problem, the answer to a question that he has asked himself, each, has reason and right to exclaim, "It is an honor, a privilege, and a joy to be a physician!"

SANATORIUM TREATMENT.*

By Dr. C. D. Parfitt, Gravenhurst.

In accepting the honor of an invitation to read before this Association a paper on Sanatorium Treatment, I realized that the subject is one which in general and also in many details is familiar, not only to you who are especially interested in the tuberculosis problem, but even to the general public. Therefore, as the title allows some latitude of interpretation, I shall confine myself to several points which seem to me of present interest, and with full knowledge that there will be many omissions of important considerations.

The slow acceptance of the value of sanatoria and the tardy adoption of the sanatorium treatment for consumption seem remarkable to those who have long known the effectiveness of sanatoria in prolonging the individual life, and of their inevitable influence in reducing the mortality of tuberculosis by the prevention of infection and the education of the public. Yet the seed long sown, and of such slow growth, has during the past decade brought forth an abundant harvest in the development of the various special institutions, the adoption by various existing institutions of sanatorium methods, the great number of lives restored to normal or useful health, others prolonged in comfort, and unknown numbers saved from fatal infection.

An open-air and dietetic treatment for phthisis was advocated by physicians of antiquity, and recurring through the centuries have come messages of its curability. In relatively recent times, shortly after the rebellion of 1745, a Scotch physician writing from the Highlands to friends in London, insisted that fresh air and diet were of first importance in the treatment of consumption, and that medicine and climate ranked only as secondary measures. A somewhat similar gospel was preached by other physicians from time to time during the next hundred years, but, nevertheless, the medical profession was quite unprepared to accept the rational principles laid down by Bodington in 1840. He carried his views into actual practice and must be regarded as the father of the sanatorium idea, since he undertook the constant medical supervision of patients in a special building, in addition to enforcing free

* Read before the Canadian Association for Prevention of Tuberculosis, London, May 17, 1911.

ventilation and providing a generous diet. This far-sighted man was in the early Victorian period far before his time, as his views were ridiculed and his consumptive patients driven from his sanatorium, which was then fittingly converted into a lunatic asylum.

Brehmer, strongly convinced of the curability of phthisis and attracted by the writings of Bodington, gave expression to his views by the creation of a small sanatorium in Silesia in 1854. Excepting the importance attributed to site, which Brehmer thought should be in a mountainous district, the principles of sanatorium treatment developed by him largely prevail to-day. Dettweiler, one of Brehmer's assistants, and a former patient, later emphasized the necessity of rest to a degree not practised by his teacher, probably much to the advantage of the average consumptive. The father of sanatoria for the poor, he lived to see Germany covered with sanatoria for the working classes before his death in 1904. Trudeau, exiled to the Adirondacks in 1873 by Dr. Loomis, because of tuberculosis, after his recovery was strongly influenced by the teachings of Brehmer and Dettweiler, and in 1884 began the erection of what has since become the famous Adirondack Cottage Sanatorium, which will long remain a testimonial to his enthusiasm, energy and altruism. In 1891 Bowditch established the first sanatorium in a "home" climate at Sharon, in the vicinity of Boston. Fourteen years ago the first sanatorium in Canada was established, and for seven years with hospitals (at least in Ontario) mostly closed to tuberculosis, there was slow progress in providing for the needs of our tuberculous population.

Canada now possesses 20 or more sanatoria and special hospitals, but this development, after the relatively early start made 14 years ago, does not keep pace, proportionately to population, with the recent development of similar institutions in the United States, which now number there approximately 400. The need of a more active work along this line may be appreciated from figures taken from Ontario only. At present there are 12 sanatoria and hospitals for the treatment of pulmonary tuberculosis, with 547 beds, which in the past year treated 1,421 patients. A conservative estimate of the actual number of patients in Ontario with an active tuberculosis is 10,000, and Phillips, of Edinburgh, would consider by his method of estimation that 21,000 are in need of medical supervision. Approximately 5% only of the former number can receive institutional treatment at any one time, and 171,000 of those now living in the province will die of tuberculosis according to the present death rate, at the rate of 2,500 yearly.

The great value to the community of special institutions for the treatment of tuberculosis is shown by the mortality statistics.

The report for Ontario for 1908 shows a death rate for tuberculosis of 112 per 100,000 a pleasing contrast to that in 1897, when the sanatorium movement was begun, and to that of 1901, when this Association was formed, the latter being 150 per 100,000 and the former approximately the same. The percentage of deaths from tuberculosis in 1908 was but 7.7 compared with 11 seven years ago. Newsholme, after an elaborate analysis of the causes which have decreased the death rate from tuberculosis, a reduction that has been proportionately much greater than that of the general death rate, concludes that no influence except that of institutional segregation has appeared in actual experience in a constant relation to the amount of tuberculosis, and it must, therefore, be accepted as having been the predominant influence. Of the 1,400 patients treated yearly in the sanatoria of the Province, who remain therein for an average of three months, only 200 die in residence, so that it seems but fair to conclude that education, the result of the training of patients in special institutions, and of the general educational propaganda, toward which this association has done so much, probably divides honors here with segregation as a cause of our 25% reduced death rate.

The reduction in mortality obtained through the education and isolation of patients at sanatoria would alone make these institutions entirely worth while for the public, even though the patients themselves did not materially benefit by the treatment. However, for the individual also, they are eminently worth while, as may readily be shown by a careful consideration of the published results of sanatorium treatment. These results have been subject to considerable criticism, because in most cases they have not fulfilled the optimistic prophecies made by some too-enthusiastic advocates at the beginning of the sanatorium movement. This failure is not the fault of the sanatoria, however, but rather that they have been asked to do the impossible. To estimate the work of sanatoria, one must know the condition of patients on admission, one must be able fairly to judge what is possible—or at least what is impossible—under certain pathological conditions, and one must know the condition on discharge. Now, sanatorium physicians, in order to have a basis for comparison of work, have agreed to use in their reports a set of really arbitrary terms. Unfortunately it is inevitable that such terms will be used (and often misused) by patients, laymen, and physicians, who do not understand truly their limitations and qualifications. Moreover, the actual improvement attained as a result of sanatorium care, however described or classified, can often only be maintained if the patient can, and will, carry out the

instruction he has received and suitably modify his home or working life. The sanatorium is surely not to be condemned, for instance, when a patient, with disease arrested and in excellent condition, takes a position as baggageman at a junction point in the Christmas season, because of the need of immediate earnings for a sick wife, and develops a serious hemorrhage within a few days.

It has been the experience of all sanatoria, in their earlier years at least, that, instead of the incipient or reasonably recoverable class of cases for whose care they have been especially built, they have been obliged to accommodate patients in all stages of the disease. Nearly all sanatoria make some attempt at selection of patients in order as much as possible to favor those in the curable stage, and success in this attempt, or the lack of it, will materially modify their statistical records. It should be recognized also that the personal equation of the individual physician has much to do with classification. Modified sanatorium methods are now applied to all classes of tuberculous patients, both within and outside of special institutions, and the term "sanatorium," originally used for institutions where a cure was attempted, has become, perhaps, unfortunately, of much wider application.

Sanatorium results must be considered in relation to the length of treatment and to the grouping of patients according to the stage of disease when admitted, rather than as a lump result, if sound conclusions are to be drawn as to the value of this work in either an absolute or comparative sense. Quite too much is expected in a relatively short term of treatment when we are dealing with a disease that in most instances has been months or years gaining a grasp upon the organism, and a deep pessimism regarding the outlook for a consumptive patient has to a large extent been supplanted by an unwarranted optimism regarding the possibility of permanent recovery. Seventy-five per cent. of patients treated in sanatoria return home before their disease is arrested. Statistics of immediate results published by various sanatoria vary between 25% and 70% for patients with disease apparently cured and arrested. The ultimate results, those which have stood the test of time, are of more value in estimating the efficacy of treatment. These will be especially influenced by the social status of patients, as a heavier mortality will bear upon those who have the harder lives. Roughly speaking, 50% of patients in the incipient stage are alive 15 years after discharge, while 50% of those in the moderately advanced stage are dead in six years. In pre-sanatorium days among the upper classes the average duration of consumption in selected cases was eight years, while among an out-patient hospital

class it was 4 years. When the treatment of tuberculosis becomes a business proposition the best results are obtained, as is evidenced by the results of the German insurance companies' sanatoria. Many early cases are sent to these institutions because it pays to find them and send them there, with the result that 7 years after discharge two-thirds of the many thousands of patients are still capable of work.

The aim of sanatorium treatment is to increase the resisting power of the patient to the greatest possible degree by taking advantage of all the measures which make for sound health and removing those which make for ill health. This is accomplished by providing an abundance of fresh air, both day and night, and a generous but not excessive diet; arranging a carefully ordered life with regulated hours of rest and exercise; preventing fatigue and excesses of all kinds; and giving education in hygienic essentials. An institution built and organized for this purpose makes the application of such principles relatively easy and permits a consistent elaboration of detail of treatment not otherwise readily effected. The special advantages of the sanatorium over treatment at home, or in open health resorts, should depend mainly upon constant, competent medical supervision. This supervision is aided by the mutual support that patients, living a communal life devoted to a single aim, give one another.

Efficient medical supervision must be based upon sound clinical work at all points. This means the maintenance of consistent comprehensive medical routine. There is in all sanatoria need of, and opportunity for, much clinical investigation and treatment apart from the special subject of tuberculosis. Breadth of training in an institutional physician is essential, as, unfortunately, specialism will inevitably limit opportunity for experience in other lines, and gain in depth of special experience is at the cost of some loss of breadth of view. All sanatoria would benefit if consistent visits were paid by physicians of experience in several lines. Not the perfunctory visits of a heterogeneous class appointed for politic reasons, whose visits are generally a hindrance and often farcical, but serious visits from a small consulting staff for clinical study in internal medicine, laryngology, gynecology and surgery.

Apart from the more formal relation of the sanatorium physician to the patient in a strictly clinical sense, he should know and control all the details of the patient's daily life—should know how thoroughly he lives the outdoor life and what modifications of it may be necessary; how his rest hours are spent; how his exercise is taken and what its effect is; what are his diversions and amuse-

ments; what are the causes of depression of spirits. Meals should be taken under his eye, or under that of an assistant or nurse, whose duty it is to encourage the patients to eat, to modify in certain cases the meal provided, to report evidence of disordered appetite or digestion, and to give a fair criticism of the food provided Instruction in the methods of the prevention of infection of others and of the patient himself must be given by the physician, or his staff, and these methods must be consistently enforced. At all times it is, of course, necessary to individualize the routine to be followed. A course of lectures giving a comprehensive view of the subject helps to inspire the patient with enthusiasm for following out the details of treatment. It may also be of much educational value.

Between physician and patient a most confidential relation should exist, and the latter should regard the former as a mentor willing to give heed to all matters which may be of the least moment to him. They should form a partnership in the business of acquiring health. Frankness between them is essential. It is important that the patient (if a recoverable case at least) should clearly understand his physical condition, and the physician must make sure that the patient does so understand. Otherwise the patient may not make the concessions, present or future, which are necessary. The future safety of the patient depends largely upon the rational appreciation he acquires of his own case, of the pitfalls that lie ahead, and to some extent of the measures he must take in possible emergencies. The point of view that a sanatorium experience should be in all points educational as well as curative should always be before him.

This matter of adequate supervision is a point too often lost sight of. Latham, before the International Congress at Washington, while confirming his previous opinion as to the great value of sanatoriums properly used, said that the majority of sanatoriums are inefficient. The principal reason given for the opinion was the failure of many to provide the discipline and constant medical supervision which are so essential to success. It is a frequent experience that the efforts of a directorate are centred at first upon acquiring a suitable plant, and, for economic reasons, after it is obtained, its staff is kept down to a minimum. Moreover, its staff's efforts are often concentrated upon effecting a low per capita cost, and the welfare of the patients themselves necessarily becomes of secondary interest. Usually a sanatorium has been projected with the ideal in view that it would become filled with early, or readily curable, cases, and that the so-called hygienic-diet-

etic treatment, so seemingly a simple matter of sane, every-day living and of easy application, would of itself suffice with but scant supervision. Experience shows that the ideal class of readily recoverable cases forms but a minority of the cases admitted to the average sanatorium even when some attempt is made to keep out those who are extremely far advanced in disease. My several years' service in a public institution forces upon me the conclusion that, with the present apathy of the medical profession toward the early recognition of pulmonary tuberculosis and the present ignorance on the part of the public of the need of attention to undramatic, but really urgent, conditions of ill-health, it will be long before there is much improvement in the class of patients admitted to our sanatoria. Certain patients will get better under any laxity of supervision if conditions of life are made a little more favorable for them, and here I may recall the fact that at some time of life nearly every one becomes infected and but 10% of the population die of tuberculosis. Other patients, on the contrary, will fail to improve, no matter what effort is made in their behalf. It is the large middle class, mostly of advanced cases, which most requires constant efficient care, as the issue for the majority of these hangs in the balance. As already suggested, there is need of study and treatment of complications, nominally secondary to the tuberculosis, but often of paramount importance, and this additional attention may cost considerable time. When much time is demanded by the sick there is less time for supervision of those who are relatively well, but who, having reached the point where they seem almost out of the woods, have entered upon the real danger time for the tuberculous. It is, therefore, evident that the staff in its several departments should be adequate for the work with due regard to the best interests of the patients. Pratt well demonstrated the value of medical supervision amongst the tuberculous poor of a great city, and obtained results, which, indeed, rather surpassed those of the average sanatorium for a similar class of patients. When developing his class method of treatment he argued that in most sanatoria the many patients had relatively little supervision allotted to each, and, since supervision was obviously so important, probably good results could be obtained if the handicap of unfavorable environment were compensated by intensive supervision.

In the regulation of the patient's life, the enforcement of rest and the adjustment of the proper amount of exercise are of first importance. A sound decision regarding these essential factors in treatment requires constant attention to every detail and is the

key to the success of treatment in most cases. The pendulum has swung from exercise as a curative agent to rest and back again to exercise. Both are necessary, but their use must always be strictly individualized.

Rest is almost invariably a necessary first measure in sanatorium treatment. Either absolute or relative, it may have to be enforced a long time, until all symptoms of active disease have subsided. More early relapses occur from abandoning rest too soon than in any other way, just as more serious over-exertion later is responsible for more fatal relapses than any other cause. Rest should be maintained as long as there is evidence of physiological depression, as shown by systemic symptoms. This will usually mean until all fever has subsided, cough and expectoration have decreased materially, and a satisfactory increase in weight has begun. Appetite will also have improved as a rule and dyspeptic symptoms have lessened. Rest is all too frequently too laxly enforced because the patient is not dramatically ill and has still comparatively unimpaired strength. Moreover, after exercise has been prescribed periods of rest will from time to time be required to overcome the evils of over-exertion.

Exercise later becomes imperative in order to induce a physiological stimulus as well as a psychological one. Through observations made on the blood of exercising patients, Inman has been able to offer a rational explanation of the effect of exercise, of its value in some cases and of its harm in others. If too great exertion is taken the fatigue makes the body incapable of response and some degree of relapse occurs.

Fatigue must always be avoided, and for one patient the rubdown after a bath may be as harmful as several miles of over-exercise for another. The excessive cough of an acute bronchitis may become a severe over-exertion for a quiescent case, which should on no account be permitted. In the increase of all kinds of exercise the previous muscular strength and habit of the patient should be considered. Great care should be taken to watch for the danger signals of over-exertion.

Since the astonishing results of graduated labor as a therapeutic agent, scientifically administered by Patterson and scientifically explained by Inman, have been published, great interest, both professional and lay, has been aroused. Unfortunately the provisoes for the safe use of this measure of treatment, a measure suggesting very possible practical application in the management and conduct of the sanatorium itself, are frequently forgotten. The fact that well-nourished, sunburned patients, often with little

energy and capacity for work, are turned out of sanatoria, engenders criticism, and it is urged that patients themselves should be largely an economic factor in the work of an institution. Before the results of Patterson and Inman had been obtained at Brompton Hospital Sanatorium, patients had been used with success in partly supplying the work of numerous sanatoria, and exercise apart from work had been an important therapeutic factor. The reason that patients' labor had not been more generally a success is, I think, largely to be attributed to the fact that most sanatoria hitherto have had a lot of patients ill assorted from the physical standpoint. In Ontario 85% of advanced and far advanced cases does not promise well for the economic use of patients, obviously from a common-sense standpoint and, mixed all together, the use of the possible 30% or 40% who might be available after a preliminary course of rest, and who might have but a short period of residence ahead, is extremely difficult from the standpoint of discipline. Under such conditions the consistent and safe use of patients in the work of an institution is exceedingly hard to effect. Patients' work should in the first place be in the patients' own interest, and if it can so be managed that it is in their interest then they must be brought to realize this and to feel that it is to maintain and improve their working capacity. This will no doubt be difficult to bring about unless at the same time more elaborate measures for graded work are provided, as at Frimley. A farm colony under medical supervision, where well-selected patients graduated from the sanatorium can prolong their cure and at the same time regain their grip on life through active work, is quite different from the work in the average sanatorium and greatly to be desired. This might readily approach Frimley conditions Patients at the Brompton Sanatorium, Frimley, are only admitted after preliminary observation and treatment at the Brompton Chest Hospital. Great care is taken to select only those who are likely to derive the greatest benefit from sanatorium treatment, and these form but 20% of the hospital admissions. Only cases of limited disease, who show improvement during the probationary course, are admitted, and they are retained as long as it is thought desirable. Before being given special graded labor the patient has to be able to walk ten miles daily without fatigue. How many cases of this class have we, or are we likely to get, in Ontario sanatoria, especially those for working people? How few are likely to reach this degree of exercise in the average term of treatment allowed! Moreover, at Frimley the effect of work upon the patient has been checked by consistent observations of the Opsonic Index,

a laborious, time-consuming work, requiring special training. Extreme care is also taken of over-exercised patients, even though the over exertion has been relatively slight. Of 184 cases discharged 110 attained a condition of total arrest. Sixty-one per cent. of all cases discharged were at work from 8 to 20 months later. It will be some time before such favorable conditions can be approximated in Canada, and in the meantime it will be well for us to go cautiously in attempting the same thing or a make-shift.

A valuable and much exploited therapeutic agent at present is tuberculin. For tuberculin to be safe and worth while a period of several months' treatment, under constant, close and skilled supervision is necessary. It is therefore better for the patient, under most conditions to have tuberculin administered in a sanatorium. It is undoubtedly a useful adjunct to sanatorium treatment, and in some cases probably shortens it, but the final test of lasting results emphasizes the value of the judicious use of this agent as an aid in the development of immunity. Moderately advanced cases are rather more benefited by its use than are incipient cases. The Adirondack Sanatorium Series show that 40 per cent. more tuberculin-treated cases than untreated sanatorium cases are alive after periods varying from one to fifteen years. Approximately 25 per cent. more treated cases had full capacity for work three years after discharge than had untreated cases at Edmundsthal Sanatorium. General nutrition is but little affected, more patients lose bacilli and fewer relapse of those who are treated.

A satisfactory diet causes most sanatoria considerable difficulty. For the class of patients suitable for sanatoria as contrasted with hospitals it is relatively less important than the surroundings and medical management, provided that it is generous and sufficiently well prepared. For those who have considerable constitutional disturbance, however, it frequently becomes of first importance. All classes of diets have to be provided when the patients of very different diseases are mixed together, and those diets suitable for fever and convalescent patients must find place as well as those for the relatively robust, who, stimulated by open air life, can eat and digest without difficulty. Long residence is apt to make those who do well unduly critical, and those who have much impaired appetite and digestion naturally become so. A culinary department intended to meet mainly the requirements of patients of the more robust type may be entirely inadequate to prepare proper diets for the former. A special diet kitchen, in competent hands, is an essential frequently lacking.

Both standard and individual dietaries should be controlled by

the medical head. The diet as finally presented to the patient, however, will depend upon the sum expended on supplies, the nearness to good markets, the care and foresight of the purchaser, the art of the cook, and the manner in which it is served. Some of the larger and more efficient institutions have found a special dietitian, appointed to prepare balanced dietaries, a valuable medical adjunct and an actual economy.

Recent investigations on the management of diet made in some physiological laboratories, on normal people, and in some sanatoria, on consumptives, will help toward a wiser future régime than has obtained in the past. Both experiment and experience have shown that a mean between the extreme amounts of food at which patients were found to improve is most suitable for the average patient. The forced feeding, in earlier days so general, is now reserved for special cases. Much excessive feeding has arisen from undue enthusiasm on the part of both patient and physician to produce a great gain in weight, since gain is an index of improvement. No more satisfactory progress is obtained in the tuberculous area, however, than by a lighter diet, while in the end the excessive feeding causes Nature to rebel with resulting harm to those who have naturally weak digestion. In order to make good the excessive waste caused by the disease a moderate increase upon the diet suitable to the individual in ordinary health is necessary. Part of this increase should be in animal food and the increased amount of this food should be maintained until the disease is arrested. If the patient is under weight there should also be a considerable increase in fats and starchy foods. These kinds of foods should be materially decreased when the patient reaches a few pounds more than his best known weight, or, if his best weight has been too low, when the standard weight for his age and height has been surpassed. Season, latitude, social condition and habit will all modify the type of diet within certain limits. Some physicians, rather prejudiced against animal food, are inclined to reduce its amount and make good the substances which it supplies by increasing the starchy foods. This alteration makes a bulky diet, that is undesirable with patients with poor digestion.

Fresh air presents few difficulties since a sanatorium has usually been built with a view to supply it in excess. Since we shall see such an excellent object lesson to-morrow little need be said on the subject, which, of primary importance, makes the name of "Open-air treatment" almost synonymous with "Sanatorium treatment." At the Queen Alexandria Sanatorium there is nothing left to be desired in the matter of applying this treatment, since

infirmary cases, as well as the abler type of cases, can quite as readily be placed out of doors. Life in the open air is the ideal towards which we strive, but this must also be suitably modified at times to the constitution, illness, or inexperience of the individual. Suitable precautions, of course, should always be taken when adopting the life and later as well. When opportunity for living out of doors is not the easy matter it is here, patients sometimes make too great efforts to get outside and, because of the effort involved, a compromise by free ventilation in their own room would be to their advantage. The patient, when once he has learned the delight and value of living and sleeping in the open, or under conditions of very free ventilation, has sometimes to be restrained rather than encouraged in the amount of fresh air that he should take.

The immediate improvement in well-being with a loss of troublesome symptoms shortly after the treatment is adopted, is very marked, and the patient at once becomes a convert to the mode of life. Because of his education in learning new values about fresh air, and in being obliged to relinquish old prejudices, he becomes at the same time an ardent missionary to his home circle. The value that sanatoria have in promoting more hygienic living on the part of the general public is very great.

When the qualities of really fresh air are realized it inevitably follows that dust, because of its own irritant character, and of its potential infective property, becomes abhorrent to the initiated patient. The sanitary disposal of expectoration and the avoidance of dispersion of possibly infective cough-droplets follows, therefore, as a corollary to accepting the principle of fresh air, quite apart from the education received in these hygienic measures. In developing consistent carefulness as in various other matters of sanatorium life, the example and criticism of fellow-patients is of the greatest value. Because of the training in the restraining of infection and because of the extreme degree of ventilation, there is nothing to be feared in the possible infectiousness of atmosphere of a well conducted sanatorium.

In the discussion of numerous details two points have been frequently referred to in this paper, namely: the crowding of sanatoria with patients who, because of severe illness, properly belong to a hospital; and the need of efficient organization for consistent supervision of all details of life of the patients. An organization reasonably efficient for the needs of an institution which treats only a recoverable class of patients, may be quite inadequate to attend properly to either class of patients when the classes are mixed to the degree that obtains at present.

PROFESSIONAL AND PUBLIC ASPECT OF THE PNEUMONIA QUESTION.*

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Pneumonia heads the list of those diseases before which our profession humbly bows in recognition of conquest. With an ever-increasing mortality confronting us, especially in large centres, nothing has been offered which is in any degree comforting as suggesting that the tables will soon turn in favor of the human element which is forced to submit annually to this infection.

Primarily interested for the last five years in the great sister lung infection, "Tuberculosis," I have been constantly struck with the fact that pneumonia frequently doubles tuberculosis in the number of deaths it claims per month. Naturally, such a condition of affairs suggests the striking contrast existing between the vast amount of money raised and spent upon the control of one lung disease, while a much more fatal infection is almost wholly neglected. This state of affairs is largely due to our lack of positive knowledge of the conditions surrounding the onset of this infection, the changes by which the body strives to resist the micro-organism, and the factors which co-operate in finally providing so graphic a conclusion as the crisis with which we are all familiar.

We have, however, certain knowledge of a positive character which has been very slow to secure a position in what should be the everyday thought of our profession—certain underlying principles which should govern the handling of every case of pneumonia, and which would go far not only to reduce the mortality, but also to prevent the incidence of pneumonia in other subjects.

Before entering upon this phase I am desirous of calling your attention to some of the difficulties which beset the research worker in advancing in his quest of relief from our present condition of subservience to this disease.

I have yet to meet a laboratory worker in this field who feels enthusiastic in his outlook on the pneumonia problem. Why is this the case? The first great difficulty is our inability to produce in laboratory animals lobar pneumonia as we see it in man. Our com-

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mon laboratory animals are susceptible to infection with the commonly accepted pathogenic organism of this disease, *i.e.*, the pneumococcus; but they react to artificial inoculation in widely varying degree from total immunity, such as is found in the pigeon, to severe septicemia, such as occurs in the rabbit, guinea pig, mouse and rat. We are able to produce, it is true, fibrinous exudate at the site of inoculation accompanied by hemorrhage and edema with occasionally increased peritoneal and pleuritic fluid; but this does not mean a lobar pneumonia. One animal, the dog, if the work of Meltzer be confirmed, responds to intrabronchial infection of broth suspensions of pneumococci by a lobar condition similar to the natural condition in the human patient suffering from pneumonia. This may establish a confirmation of the belief based upon bacteriologic studies on pneumonic lungs that the pneumococcus is the main organism responsible for pneumonia in man, and may lead to an experimental basis which will permit of a study of the underlying physiological and biological principles of the onset, progress and cure of lobar pneumonia infection.

A second great difficulty lies in the symbiotic action of microorganisms which surrounds the relation of the penumococcus infection of the human body. The pneumococcus is so continuously associated with other organisms in the normal mouths and so frequently in pneumonic lungs, that more than a suspicion is justified that the secondary organisms have some relation to the virulence of the infection. In this connection I would call your attention to the experiments of Park and Williams (1), who found that mass culture results in more virulent strains of pneumococcus and more frequent entrance of these into the blood strain. Mass culture is obtained by inoculating sputum into broth, allowing this to grow at 36°C. for 24 hours, and inoculating the resulting culture into the animals chosen for experimentation. In this connection the reports of Norris and Pappenheimer (2), of Duval and Lewis (3), and of Buerger (4), on the relation of allied and associated organisms are of great interest. It is possible that the question of symbiosis must be solved before our difficulties concerning lobar pneumonia have cleared away.

The symbiotic organisms are:

Streptococcus pyogenes,
Friedlander pneumo-bacillus,
Staphylococcus aureus and albus,
Influenza bacillus,
Pseudo-diphtheria bacillus, and
Streptococcus mucosus capsulatus.

Anyone who has worked at the isolation and segregation of pure cultures will realize how gigantic is the task here represented.

A third difficulty lies in the relation of the leucocytes to this infection. One of the most striking clinical phenomena in lobar pneumonia is the polynuclear leucocytosis, carrying with it good prognosis varying directly with its degree, and yet a glance at some of the haze surrounding it shows how little we understand it. For instance: In spite of the favorable aspect of a leucocytosis in these cases there is grave doubt that this favorable influence is due to the phagocytic power to which we usually ascribe it, for Rosenow (5) found that 75 strains of pneumococci from the blood in pneumonia were insusceptible to phagocytosis when first isolated, a point associated, as he and others have shown, with virulence of the organism. Rosenow (Loc. cit.) ascribes much of the difficulty in obtaining phagocytosis of virulent pneumococci to a substance contained in the organism which he calls "virulin." This he is able to extract by autolysis in salt solution. Hiss and Zrisser (6), on the other hand, have laid great stress on the attitude of the leucocytes themselves in this infection, and have endeavored to solve some of the difficulties by the use of leucocytic extracts, and within a month or two, Ruth Tunnicliffe (7) has published results of experiments from which she draws the following conclusions:

1st. There is an increase in phagocytic power of leucocytes in mild cases of pneumonia.

2nd. In severe cases the power of phagocytosis is diminished until the patient improves, when it rises above normal.

3rd. There is no specificity in the phagocytic power of the leucocytes.

I must not enter this discussion further, but what I have said will serve to indicate how uncertain is our knowledge on this side of the question.

A fourth difficulty arises from lack of knowledge of the chemical processes which occur in the lobe of the lung which bears the assault of the infection and passes through the stages of congestion, red and grey hepatization, and resolution. In this field our knowledge has within the past few years gained some headway. Most interesting probably is the work of Lamar (8) in the laboratory of the Rockefeller Institute, on the influence of certain alkaline soaps of oleic acid in producing in conjunction with certain sera lysis of the pneumococcus.

We have known for some years that the pneumonic lung under sterile conditions in the thermostat would undergo marked lysis. We have known, also, that the soaps are abundantly present during

this lytic process; also that the soaps are bactericidal for certain bacteria. Lamar has made use of these facts and has found that pneumococci treated with dilute solutions of sodium oleate undergo autolysis much more rapidly and completely, and in the presence of immune sera undergo rapid and complete destruction. Further, that the inhibition which the action of soaps ordinarily suffers in the presence of protein can be prevented by such chemical substances as boric acid. Such mixtures of soaped pneumococci serum and boric acid not only prevent infection, but confer immunity on experimental animals. No increase in phagocytosis is produced. This work throws much light on the lytic processes going on during resolution, but still adds no new light to the question of treatment.

A further question is aroused by the frequent finding of pneumococci in the healthy portions of lungs of those dying from lobar pneumonia. Why, for instance, does one lobe succumb while the others survive, even though the organism is present also in the latter? The whole problem of lung chemistry is a negative and rather dark field; but that the lung tissue has some definite and peculiar chemical composition can no longer be doubted.

One of Hektoen's (9) students, working in his laboratory, thought that lung tissue should form an excellent medium for the growth of tubercle bacilli since these organisms developed in this organ so readily during life. To his surprise he found that no growth could be obtained and that the lung tissue evidently had some baneful influence on tubercle bacilli in vitro. In our own laboratory during the past year we have been studying the influence of autolysed lung extract on tuberculous infection, and find in the extract of autolysed lung some compound, probably a soapy element, which is inimical to the tubercle bacillus, and when injected with tubercle bacillus into an animal confers protection on that animal. So that a better understanding of lung constitution and chemistry will doubtless aid in elucidating many of the problems connected with its peculiar infections.

Again we are confronted by a lack of knowledge of the composition of the serum of pneumonia patients and of those animals which have been rendered immune to this organism. Evidently, as you have all convinced yourselves, the immune sera are questionable in efficacy in those suffering from pneumonia. On the other hand, as Lamar (Loc. cit.) and Tunnicliffe (Loc. cit.) have shown, there is something in the immune serum which is not in normal sera, and also in the serum of the pneumonia patients. We are perhaps nearer a solution of what this substance is from Lamar's studies with soaps and inhibitory substances, such as boracic acid.

Let me now call your attention to certain positive knowledge concerning the pneumococcus which has accrued during the past few years, and follow this with certain suggestions which seem well founded, at least for the suppression, if not the cure, of the disease for which the organism is held responsible.

The most striking bit of positive knowledge is the uniform presence of this micro-organism in the nasal discharges and buccal cavity of practically every city dweller during many months of the year. This is the more striking when we consider that the organisms isolated from these sources in those apparently well, are often of as high virulence as those organisms obtained from the lungs of those who have succumbed to lobar pneumonia. Park and Williams (10) found typical pneumococci present in the throat secretions of a large percentage of healthy individuals in city and country. Longcope and Fox (11) found that during certain months, *i.e.*, December to February, in other words, those months which precede the great prevalence of pneumonia, a large percentage of normal persons harbor virulent pneumococci in their buccal cavities. Leo Burger (Loc. cit.) found that about the same proportion of non-virulent pneumococci are to be found in the mouths of patients suffering from pneumonia as in the mouths of normal individuals, and that practically no differences were to be noted in the percentage of virulent organisms in the mouths of normal individuals and pneumonia cases—79 per cent. in the former and 77 per cent. in the latter.

Secondly, we know that the pneumococcus can live (12) in the dark in dried sputum for 35 days or more; in diffuse light for 30 days; and in sunlight only a few hours. On cloth it will live longer. We are positive, further, that pneumococcus-free persons may acquire pneumococci from positive cases; that handkerchiefs and dishes, drinking cups, etc., used by positive cases, *i.e.*, those harboring pneumococci, are capable of transferring this organism. Cases of house infection of pneumonia are so common to-day that I need only call your attention to it to convince you of the dangers arising from rooms and houses in which pneumonia has occurred.

One of the first gleams of intelligence I had in medicine was a house infection of pneumonia in Toronto, in which a mother and two children living in one room succumbed in succession to a very graphic and virulent pneumonia.

A fact, however, with which all of us are not so familiar is the casual relation which the pneumococcus has to certain of our chronic heart and joint cases. Rosenow, who has made the pneumococcus group especially his field of study, has lately again called attention

to the chronic endocarditis cases that result from pneumococcus infection, and the persistence of these organisms in the blood; and I have lately seen a case of malignant endocarditis in which we were able to isolate pure pneumococcus by blood culture. These cases—chronic pneumococcus, endocarditis and arthritis—take this organism out of the field of acute diseases and enter against it the more serious charge of responsibility for many of our chronic maladies of formerly unknown origin.

Coupled with this phase of the question is the mutability of this organism both in vitro and in vivo. It changes not only in virulence easily, but also in morphology and cultural characteristics by artificial cultivation and animal passage, and this very elusiveness of its nature has contributed not a little to our progress in appreciation of its power against us.

In general it may be said that the pneumococcus has the whole body for its field since it sails with great freedom wherever the blood stream travels, and for this reason is frequently described as a septicemia, but its manifestations are local, and, in addition to endocarditis and arthritis deposits, every specialist who deals with the serous structure sooner or later comes in contact with it in such serious maladies as otitis media, meningitis, bronchitis, conjunctivitis, etc.

Where such facts as these stare us constantly in the face, is it not strange that we are so slow to utilize the knowledge which we already possess of means for suppression. With the results of concerted action by means of education, segregation and fumigation in tuberculosis work before us, it seems probable that we could at least accomplish something by these means in pneumonia. It is commonly objected to this proposition that the two infections are so different that they cannot be handled in any similar manner. This objection, however, does not seem to be valid when one compares the two maladies in the following way:

Both are mainly pulmonary diseases; both the result of organisms constantly present (1, 2, 3, 4, 5, 8) within and outside of the human body; both infections are contracted mainly by inhalation and hastened to their maturity by bad housing, food and hygienic conditions (6); both are accompanied by cough and sputum containing myriads of the infecting agent; both infective through droplet (7) and air dried sputum (7); both often the result of unconscious carriers (9, 10) of infection; both are house diseases; both have no specific cure and rely on hygienic conditions for improvement; both are characterized by relapses (11); both produce sickness (8) in lower animals; both germs are capable of life

outside the body for hours to weeks (7) dependent upon environment; both remain quiescent in the body for varying lengths of time; both are responsible for secondary chronic conditions (12).

It is very likely that we cannot utilize many of the more bizarre attachments of the Tuberculosis Campaign, or even of the more useful methods of this work, such as the dispensary, and yet it seems to me that even the dispensary might be so modified that its visiting agents could afford the greatest service among the poorer classes by education and nursing of even so rapid and graphic a sickness as pneumonia.

Even if such adaptation seems impossible there still remain many things which stand forth with the label of neglected duty tacked upon them:

First, our neglect in educating the public on the positive knowledge we possess of the infective nature of this sickness, the means of preventing its spread, the means of raising the resistance to it—in fact, while we ourselves have known these facts for many years we have not yet grouped pneumonia in the public mind with our other reportable and preventable diseases.

Second, our present methods of handling such patients in hospital wards without segregation of patients and utensils, and without special instruction on its infective nature to our students, house officers and nurses, are most responsible.

This is the more striking in that we have totally excluded tuberculosis, a less infective disease, from our general hospitals, where, as a matter of education, it properly belongs in specially constructed wards, and have retained pneumonia, which is more infective, mainly because the patient is so unable by reason of his severe illness to exercise any precaution. I trust the day will soon come when the constant shutting out from our general hospitals of each malady as it comes into the limelight as a preventable disease will cease, and that we will make proper provision for all classes of cases, so that those who receive instruction in these institutions—nurses, students, doctors and the public—will have the full benefit of the knowledge generated there. So long as we persist in the lopping system of the past few years, and send out such partially trained members of the backbone of our public health restrictions, so long will we fail in our desired end, and our hospitals will become more and more great surgical amphitheatres.

As a plan of procedure, then, I would suggest first of all the proper segregation of pneumonia patients and their utensils in hospitals; cleaning by sprays and washes of the noses and throats of all who nurse and come in contact with these patients; careful hand washing of nurses and attendants after handling; careful

destruction of sputum and other discharges; sterilization of linen of patients; fumigation of rooms after occupancy; and the use of gauze, which can be burned, instead of handkerchiefs. This will be the centre of the educational crusade.

Second. Attached to our dispensaries certain nurses who have received special instruction on nursing and preventing the spread of pneumonia, to be sent to all pneumonia cases in home nursing work.

Third. The reporting of all such cases to the health department governing the district where the disease exists, and the fumigation of the quarters in which the disease has occurred by the department after the death or recovery of the patient.

Fourth. The instruction of the public by pamphlets and school lectures on the necessity for keeping the noses and throats cleansed, especially during winter months; the necessity for controlling the dust of streets by better sprinkling and night sweeping; the evils of bad ventilation in house, public building and school; of alcohol; of badly cooked and poor food; of lack of rest; of worry; of the handkerchief; of the bearing of spitting on pneumonia as well as other diseases; of the increased resistance generated by open-air sleeping; and similar knowledge. This, I am sure, can best be engrafted on the child's mind rather than on that of the adult.

I have merely sketched to you the outline of preventive measures which are demanded by present positive knowledge of a disease for which we have no cure, and which is at present our most mortal enemy.

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Medicine

Graham Chambers, R. J. Dwyer, Goldwin Howland,
Geo. W. Ross, Wm. D. Young.

Rheumatism and So-Called Chronic Rheumatism. T. McCrae, M.D., Asst. Prof. of Medicine, Johns Hopkins Univ. *Can. Med. Ass'n. Journal.*

McCrae briefly discusses this important subject and calls attention to the many diseases called chronic rheumatism. He states that he has never seen a single impaired joint following an attack of acute rheumatism.

The true causes of chronic arthritis are gonococcal and tubercular infections, other bacillary invasions, gout, arthritis deformans, sacroiliac disease, senile arthritides.

Again a mistaken diagnosis may be made in cases of muscular fibrosis, occupation neuroses, flat foot, neuritis, tabes, syphilis, aneurism.

In connection with the outdoors at the Toronto General Hospital cases frequently attend who have been treated for months for rheumatism, and the reviewer finds that the most usual errors have been in this order: Flat feet, arthritis deformans, gonococcal infection.

Arteriosclerosis and Nervous Affections. A Clinical Lecture. By Professor von Romberg, M.D.

The professor considers that the functional neuroses, particularly neurasthenia and manic depressive insanity, are the most important causes of arteriosclerosis, from the fact that the demands made on the blood vessels during a lifetime are dependent largely on the behavior of the nervous system. So also toxins which act on the nerve cells will contribute to this result, as for instance, tea, tobacco, alcohol and syphilis.

So then the symptoms of arteriosclerosis and functional neuroses must frequently co-occur, and this paper was written to clear up what is nervous and what is organic in those cases.

Compare in the first place the results of restricted blood supply to the legs or arms, the pallor and numbness, pains, cramps, cold-

ness, all due to vascular hardening, and compare the neurotic disturbances due to vasomotor spasm, similar in nature and leading frequently to similar thickening of the arterial walls.

In cardiac angina the diagnosis is of extreme importance, and one need not repeat the similar symptoms occurring in organic and functional forms. However, if one compares the relation of preceding exercise, or excitement, or even profound sleep; the absence or presence of attacks following preceding difficult energies; the occurrence of diminished diuresis, cardiac dilatation or dyspnoea (note that X-ray and percussion frequently give incorrect statistics); pulse rhythm (especially irregularities, and it may be added here that organic extra systoles are not noticed by the patient); aortic sclerosis with such signs as enlargement and systolic murmurs followed by pronounced second sound in the aortic area; by all these means we may conclude the case to be organic.

Again early signs of interstitial nephritis may be considered to be merely neurotic.

Albumin may be absent and no casts occur, perhaps the only sign of edema being a morning puffiness of the face; but note the second cardiac sound, and the tension of the pulse.

Asthmatical attacks or merely respiratory quickening may be a feature, also migraine, diarrhea, thirst.

Brain arteriosclerosis may completely copy the symptoms of neurasthenia, insomnia, early awakening, cephalic sensations, volitional defect, rotatory vertigo, motor paresis, paresthesias of hemidistribution, and so on.

Functional and organic diseases dependent on vascular origin are therefore difficult and important to distinguish from one another.

The Influence of Parental Alcoholism on the Physique and Ability of Offspring. By Theo. B. Hyslop, M.D., C.M. Edin., F.R.S. Edin.

The conclusions arrived at by Dr. Hyslop are mainly, that alcoholics have larger families than the normal individual, and that these children tend to become alcoholic or show psychoneuroses at an earlier age than their parent, but whether this is due to the intoxicant or to a psychoneurotic parent, is not clearly decided. Also these neuroses are intensified when alcoholic inheritance exists instead of being diminished by new influences. G. W. H.

Reviews

The Treatment of Syphilis By the Ehrlich-Hata Remedy. By Dr. Johannes Bresler. Second edition. Translated by Dr. M. D. Eder. Published by Rebman, Limited, London and New York.

This book describes the methods of using the remedy, "606," and cites a large number of cases of syphilis in various stages, and gives the results obtained by treating them with this remedy. It is very well written and decidedly worth reading.

W. W. J.

"606" in Theory and in Practice. By Prof. Paul Ehrlich and J. E. R. McDonagh, F.R.C.S. An Oxford Medical Press Publication.

Is an extremely interesting and useful book.

Prof. Ehrlich writes the introduction and tells how and why "606" was produced in the laboratory.

Mr. McDonagh deals with the clinical results obtained in a large series of cases met with in the London Lock Hospital. The book is very instructive and well worth perusal.

W. W. J.

1,000 Surgical Suggestions. By Walter M. Brickner, B.S., M.D., Adjunct Surgeon Mount Sinai Hospital; Editor in Chief American Journal of Surgery, with a collaboration of James P. Warbasse, M.D., Harold Hays, M.D., Eli Moschcowitz, M.D., and Harold Neuhof, M.D. 225 pages. Cloth bound, Semide Luxe, $1.00. Full de Luxe, leather, $2.25. Surgery Publishing Company, 92 William Street, N. Y., U.S.A.

This is one of the biggest little books ever presented to the profession. In its 225 pages are found a collection of 1,000 epigrammatic succinct, virile and instructive hints based upon actual experience, and everyone a lesson in itself.

The suggestions are so arranged and indexed that all subjects covered can be immediately referred to, and the particular hint upon any particular subject immediately found. It bristles with pointed and useful suggestions, which in many cases might just turn the scale from failure to success. Its mechanical presentation

is a feature worthy of mention. It is square, cloth bound, stamped in gold, printed upon India tint paper with Cheltenham type with special marginal side headings in red. A dollar could not be better invested than in the purchase of this book.

Catechism Series. Surgery. Part II. Second edition. Revised and enlarged. With plates. Price, one shilling net. Edinburgh: E. and S. Livingstone.

Well arranged, concise, embracing injuries of bones, fractures and dislocations, diseases of bones and chapters on the thorax and breast, this little catechism will be found a very useful hand-book for students, reviewing a whole lot just before examination time. We would heartily recommend the entire series to students. The revision has made possible the introduction of the very latest points.

Medical Guide and Monograph Series. Golden Rules of Pediatrics. By John Zohorsky, A.B., M.D., Clinical Professor of Pediatrics Medical Department Washington University, St. Louis, etc., etc. Price, $2.50. St. Louis: C. V. Mosby Co.

This is a book incorporating therein a great deal of useful, concise and practical information. It consists of aphorisms, observations and precepts on the science and art of pediatrics. It gives practical rules for diagnosis and prognosis, the essentials of infant feeding and the principles of scientific treatment. There is an introduction by Dr. E. W. Saunders, Emeritus Professor of Diseases of Children of the above mentioned university.

The Anatomic Histological Processes of Bright's Disease, and Their Relation to the Functional Changes. By Horst Oertel, Director of the Russell Sage Institute of Pathology. Philadelphia: The W. B. Saunders Co. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

Oertel quotes C. Lucillus in his introduction: "That he did not wish to be read either by the very learned nor by the very uneducated; for the latter would not understand him, while the former might possibly know more than he himself did."

There are certain standard works which modern physicians must own, and to my mind it is better to possess a book on each important subject written by an authority, rather than a "System" written by

many authors and necessarily abbreviated. Truly the latter has its value in containing much that is needed for reference, but one requires the master hand to clearly describe in completeness the great subject he has made his lifework. And in this little understood study of the pathology of the kidney lies the key to the knowledge of those clinical cases which we group together vaguely as nephritis.

In the clearest of language, in the same manner that Oertel himself presented his subject through the five lectures he delivered in the New York City Hospital in 1909, there is described here his own views as to the one great disease he calls nephritis, which may be characterized by all the features of degeneration, exudation and productive changes, or be mainly distinguished by the development of one of these processes in excess of the others.

Away goes your framework of acute glomerular nephritis, of chronic interstitial or parenchymatous disease, and you assimilate while reading the well worked results of the master worker and get a new firm background to study your own clinical cases.

Pathology is usually dry reading to the physician, but one can sit down and digest the contents of this volume with more pleasure than the best clinical description, and it is with regret that the last page is reached.

The plates are splendid, the paper is good, but the material is superfine. It is impossible for a student of medicine to be well read on nephritis and to be without Oertel's masterpiece.

G. W. H.

Dr. Luther Halsey Gulick, director in the Russell Sage Foundation, and formerly director of physical training in the New York Public Schools, has written a noteworthy series of articles on athletics in their relation to health, for Lippincott's Magazine. The first of these, "The Requirements of Healthful Exercise," appeared in the June number. That in July is entitled "Games and Gangs." It deals with the ever-present Boy Problem, and will prove a revelation to worried parents and harassed teachers. Dr. Gulick's long and varied career in the fields of hygiene and education renders him well equipped for writing on such topics, and the papers may be regarded as authoritative.

THERAPEUTIC NOTES

Local Treatment in Gynecology.

Henry T. Byford says that often iodine and phenol are applied to the cervix uteri when not indicated; that abstraction of blood from the cervix in chronic hyperemia of uterus and adnexa is useless and injurious; that glycerine and ichthyol tampons sometimes act as irritants and not of very great efficacy; that the copious high temperature douche is of no practical use except as a cleanser. Medicated douches have a certain value when employed intelligently.

Gastric Superacidity.

G. W. Hall (*Boston Med. and Sur. Jour.*) observes that hydrogen peroxide lessens the hydrochloric acid in the stomach. Patients with hyperchlorhydria get great or total relief from their symptoms. He says it does not appear to benefit cases with active ulcer.

It is an efficient hemostatic in epistaxis, why not in hemorrhage from ulcer of stomach?—Ed.

Pernicious Anemia.

Muktedir (*Deut. Med. Wochen.*) gave a tablespoonful of glycerine in a man of 30 years with pernicious anemia, infected with syphilis four years previously. This was given three times a day at first and later on up to 70 gm. The patient seemed to be apparently cured, and the only by-effect was a transient diarrhea.

Flatulence.

Le Progress Medicale recommends: Mag. carb, one drachm; pulv. rhei, one-half drachm; ol. menth. pip. minims, twenty; for twenty pills. Two pills to be taken after each meal.

Gonorrhea.

The Schindler treatment consists in the use of atropine in doses up to 3 mgm., in rectal suppository or direct distillation. If atropinism supervenes the drug must be stopped. In addition, strong solutions of protargol (3 to 5 per cent.) cocaine added to deaden the pain. By this the duration of treatment is shortened.

Dominion Medical Monthly

And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH.

The Standardization of Disinfectants.—Articles have been appearing recently in some of the medical journals of the United States advocating the standardization of commercial disinfectants. A certain amount of doubt has been thrown of late by some sanitarians of the United States on the value of after disinfection, that is the disinfection of houses, rooms and clothing of persons who have died or recovered from communicable diseases. However, the majority of medical men still believe in the need of after infection, and even if they did not do so, the use of liquid disinfectants is indicated in many other ways.

If then it is agreed on all hands that the employment of liquid disinfectants is on occasions essential, it is equally obvious that such disinfectants should possess those germicidal properties which alone can render their use of value. In Great Britain there are means whereby the germicidal properties of commercial disinfectants may be guaranteed to a large extent. In 1903 Dr. Rideal and Mr. Ainslie-Walker devised a method by which the germicidal strength of disinfectants might be tested. The principle of this method, known as the drop method, is simple. Solutions of the disinfectant to be tested are made up in various strengths with distilled water and compared as to their germ destroying action upon,

say, the typhoid bacilli, with a solution of carbolic acid of known strength, say 1 part in 100. Ultimately a strength of the disinfectant will be found which will be identical in its germicidal properties, with the known carbolic acid solution, that is, will destroy the typhoid bacilli in exactly the same time as the latter. For instance, if the solution which does this is of a strength of 1 part in 80, we should be able to state that under the conditions of the experiment, 1 part in 80 did the same work as 1 part in 100 of carbolic acid; its strength might then be set down as 80-100 or 8 as compared with carbolic acid, and this would be its "carbolic acid co-efficient."

There have been various methods other than the Rideal-Walker brought out to test liquid disinfectants, but in England, although it is freely acknowledged that the "drop method" has grave defects, the conclusion has been reached that on the whole it has answered the purpose for which it was devised better than any other. The British Admiralty and Army Department have officially adopted it, as have likewise a large number of sanitary bodies in Europe and Great Britain. But irrespective of its merits which are open to argument, and which many authorities believe are outweighed by its defects, the great good which the introduction of the method into Great Britain has brought about is that it has done more for raising the standard of commercial disinfectants than anything else, and by its employment a number of unreliable products have been eliminated. Its use acts as a security, to some extent, to the public that the disinfectants on the market are really what their manufacturers and vendors profess that they are. On this continent, except in Maryland, U.S., there is no such check on the manufacturers and retailers of liquid disinfectants. If disinfectants are expected to do the germicidal work required of them, there should certainly be means for verifying the statements made as to their efficiency. C. A. C.

The Public Drinking Cup has to go. In Toronto, the Health Department is waging war upon it in schools, parks, play grounds, horse troughs, public buildings, etc. But not alone in these connections, but in hotels, restaurants, at soda water fountains and elsewhere, attention is called to the manifest danger the public runs in its promiscuous drinking.

Some one has called the public drinking cup the "cup of death;" and if observations were to be made and the results of its nefarious work followed up and recorded, it might even prove to be a hydra-headed monster.

The campaign against it is being waged to considerable extent all over the American union. Kansas was the first to abolish it. Michigan, Wisconsin, Mississippi, New Jersey, New York, soon followed suit. Pennsylvania has sounded its warning. Illinois has declaimed against it as a formidable menace, and has driven it out into the wilderness. Chicago has donned its armour and has gone forth to give battle to the Philistine. Connecticut has the co-operation of the intelligent corporations and citizens. After October 1st New York City will have joined the insurgent army in opposition to the long-established custom. Railways, theatres, hotels, factories, are falling into line. The slot machine with the paper cups will supersede the execrable practice.

Newspapers, periodicals, magazines, journals, are lending a strong helping hand, and so a knowledge of the dangers lurking in the common drinking cup is being diffused throughout the land.

It is easily conceivable how tuberculosis, diphtheria, syphilis and other infectious and contagious diseases may be disseminated through the medium of the disgusting and barbarous custom. Concerted action will bring about its total abolition.

The Opening of the New Medical Building of McGill University took place on June 5th, His Excellency, the Governor-General, officiating at the ceremony. The erection of the new building was made possible by the splendid generosity of Lord Strathcona, who presented the site directly facing the Royal Victoria Hospital and accompanying it the sum of $450,000. At the convocation Dean Shepherd was pleased to announce that the High Commissioner had added to this $100,000 for proper and complete equipment. Thus has the disaster of three or four years ago been triumphantly overcome.

The frontage of the building is 265 feet, with a similar frontage on the university campus. On University Street it extends 171 feet, and 114 feet on Carlton Road. It is four stories in height, built of Montreal limestone over steel construction, fireproof.

The occasion of the opening brought together in re-union a very large number of graduates. This was mostly in evidence at the large banquet tendered by the Faculty in the Windsor Hotel on the evening of the 6th of June, in which over five hundred guests participated.

It was at this celebrated and historic banquet that Professor Adami, who knows the medical profession as well as any man could know it, took to task Mr. G. B. Shaw for his rude jibes at the

medical profession. Probably that erratic satirist and playwright received more attention than his drooling warranted. The incident would only serve the purpose of more advertisement—a circumstance very dear to the self-same Mr. G. B. S.

McGill is to be congratulated upon the splendid outcome of its disasters, and all good friends will wish it continued advancement, expansion and renown.

Queen's according to publication No. 3, issued by the Medical Faculty of Queen's University advocates the following reforms in the Ontario Medical Council:

1. *Matriculation.*—The matriculation of the Council should be uniform with the junior matriculation in arts conducted by the Education Department.

2. *Curriculum.*—The universities should be free to arrange the details of the course. The Council should have a simple regulation that every student must spend a period of five years in professional studies in a university, college or school of medicine approved by the Council.

3. *Examinations.*—There should be one final examination at the end of the fifth year. Candidates should be graduates of an approved university. The examination should not be unduly prolonged, and all restrictions should be removed as to those eligible for appointment as examiners. If in place of this final examination any workable system of assessors is proposed, Queen's is quite ready to consider it fairly.

4. *Fees.*—The fee should be reduced materially. Twenty-five dollars or at the most fifty dollars should be enough in place of the present fee of one hundred. The Council should recognize that there is no reason why it should accumulate money, and if it has money to spare it belongs to the profession and should be used in some way to further its interests. If it established some fellowships or research scholarships with the money it now has it would only be doing its duty.

5. *Reorganization of the Council.*—For two reasons the members of the Council should be reduced. First for economy, and second for efficiency. At present there are five homeopaths, eighteen territorial representatives and eight collegiate, of whom five represent defunct medical schools. We suggest that eight territorial representatives, three collegiate and one homeopath, making twelve in all, would be a proper Council. As to homeopaths,

there are only about forty in the Province, so it is out of all reason that their representation should be so great. An enlargement of the electoral districts will meet with the approval of the profession as an economical reform.

The Ottawa Typhoid Fever Epidemic, occurring from January 1st to March 19th has been thoroughly investigated, and the result is an extensive report on the subject.

Dr. Chas. A. Hodgetts, medical adviser to the public health branch of the Canadian Conservation Committee, was at the head of the committee which investigated the outbreak, and with him was associated Dr. R. W. Bell, of the Ontario Board of Health, Colonel Carleton Jones and Major Lorne Drum.

The immediate cause of the epidemic was the infection of the water supply—infected milk, food, supplies of all kinds, including ice, unsanitary conditions and sewage from sewerage system and sewer gas being excluded.

The report states: The outbreak would have been obviated had the hypochlorite treatment been installed forthwith after its recommendation by Mr. Hazen, on October 5th, 1910.

There was nothing abnormal in the last month of 1910, there having only been reported to the Medical Health Officer five cases, but the inquiry elicited the fact that there were five other unreported cases.

Up to the middle of March, there had occurred in 1911, 901 cases, of whom 422 were males and 479 females—the ages ranging from 3 to 75 years.

Fifty-two cases died before March 18th, a death rate of 5.7 per 100. Others died after that date so that the mortality was even higher.

The report is well illustrated with numerous charts and maps.

The horrible conditions depicted are a sad commentary upon the modern sanitary requirements in the slums of a great city.

The Canadian Medical Protective Association held its annual meeting in Montreal, June 8th, 1911. In the absence of the President, Dr. R. W. Powell, Ottawa, Dr. John Stewart, Halifax, presided. All the old officers and the executive were re-elected.

The report of the President was a very brief one. It referred to the fact that there was only one case before the courts during the past year. This was the first case lost by the Association since

its foundation. There were some ten to twelve cases threatened, but the known fact that the Association would offer determined resistance acted as a deterrent.

The solicitor advised the incorporation of the Protective Association and also advised consideration of the extending the scope of the Association so as to cover a wider field, similar to that occupied by the London Medical Defence Union.

The treasurer reported the receipts during the year to have been $2,139.00, and that the Association now had funds in hand to the extent of $6,807.11. Of the total receipts Ontario contributed over one-half, showing that there is great scope for extension of the society in the other provinces.

It is important to point out to those of our readers who are not members of this Protective Association that no one can become a member to enjoy the benefits of the Association when the facts which led up to a suit occurred prior to membership.

The annual fee is only $3.00, payable in January of each year. We strongly urge our readers to become members of this worthy organization.

To Sir William Osler, Bart., the Canadian medical profession extend hearty congratulations.

Dr. H. B. Anderson, Toronto, has returned from Germany, where he spent several months in graduate work.

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Original Articles

*DIAGNOSTIC VALUE OF THE CYSTOSCOPE.

By Geo. Ewart Wilson, M.B. (Tor.), F.R.C.S. (Eng.),

Demonstrator of Anatomy, University of Toronto; Clinical Assistant in Surgery, University of Toronto.

Of the numerous mechanical devices for diagnostic purposes invented within the past quarter of a century, the cystoscope stands easily in the front rank. To Doctor Max Nitze must be given the honor of being its originator, he having designed his instrument in 1879. In Nitze's original instrument the source of light was a platinum loop kept at a white heat by an electric current. This was a tremendous advance upon the old paraffin lamp, although Bruck of Breslau, a dentist, had fifteen years previously conceived the brilliant idea of utilizing a platinum wire heated by galvanism as the source of light for examining the mouth, and constructed for that purpose what he called a stomatoscope. The difficulty with the platinum loop cystoscope lay in the great heat given off, thereby necessitating a water-cooling apparatus which was so cumbersome that although the instrument was hailed with delight by the profession it soon fell into disuse. With the introduction by Edison of the cold lamp the modern cystoscope had its inception, Nitze having successfully used it in 1887. Since that time numerous modifications and improvements have been put on the market, especially devices for catheterizing the ureters and a plan whereby the bladder can be irrigated to insure a clear medium.

In general cystoscopes are divided into the direct and indirect. In the former the prism is at the end of the tube, and one sees that part of the bladder in the direct line of the shaft; while in the

*Read at meeting of Ontario Medical Association, Niagara Falls, May-June, 1911.

indirect the circle of the viscus which comes into view is at right angles to the long diameter of the instrument. Some are so constructed that the illumination is on both sides of the beak, while others throw the light on only one side, either back or front. In some the catheters emerge on the convex while in others on the concave side. Personally, I use the improved Nitze instrument with the light on the concave aspect of the beak near its termination, the prism being placed in the concavity formed by the shaft and the beak; while immediately behind this lies the opening for the emergence of the catheter with an arrangement for changing the direction of same. The cystoscope proper can be withdrawn from its sheath for irrigation purposes and without allowing the bladder content to escape. The calibre of the instrument used for catheterizing purposes is No. 22 French. For simply examining I use Nitze's No. 18 French.

Before attempting to use a cystoscope upon the living, unless one is fortunate enough to receive his training from someone thoroughly acquainted with its use, he should practise carefully upon a bladder in the post-mortem room; or, if that be impossible, then with Leiter's phantom bladder. The former method, however, is much the better, for one can familiarize himself with the passage of the instrument and can also open the abdomen and pass a catheter down the ureter until it just enters the bladder, thus allowing the operator to orient himself. It is surprising what a good view may in this way be obtained; the color of the mucous membrane, provided the subject be fresh, differing very little from that seen in the living. By so doing he will save himself an immense amount of time and his patients much pain. At the same time he will become familiar with the various distortions of the images seen and appreciate, for example, that an object which is apparently in front of an ureteral orifice is in reality behind it. True, there are instruments now made correcting such distortions, but to one who has become acquainted with the uncorrected images they are very readily intelligible. Thus equipped, the surgeon is in a position to examine his patient, and I now propose to describe briefly the technique employed.

There are three requisites for a successful examination of the bladder: (1) The urethra must permit of the passage of the instrument without the use of any undue force, and generally the calibre must be 22 French, although for examination purposes only an 18 French might suffice. (2) A clear medium, either in the form of the patient's urine, as desired by Fenwick, or a 1:30 boracic solution. If the bladder is particularly sensitive I use a normal salt solution,

as it seems less painful. Casper recommends oxycyanate of mercury 1:5,000, believing it to be the least irritating of the antiseptics. (3) The bladder must hold at least 4 oz. of the medium.

With these conditions fulfilled we proceed as follows, taking a male patient as an example: If practicable, he should be given ten grains of urotropin three times a day for twenty-four or forty-eight hours previously, and about a pint of Vichy water half an hour before the examination. With everything in readiness, he should connect up the cystoscope and adjust the transformer so that the lamp emits a clear white light. The instrument may then be disconnected and placed in 1:30 boracic solution. The patient is placed upon his back, with a pillow under the buttocks to elevate the pelvis; the legs are flexed, the heels resting upon footrests, or, if desired, the lithotomy position may be adopted. The penis is now thoroughly cleansed by an assistant, using green soap and water followed by 1:2,000 bichloride. The whole pubic region is then covered with a sterile towel having an opening suitable for the passage of the penis. The surgeon now scrubs up, puts on a rubber apron, sterile gown and rubber gloves. The latter, while essential for asepsis, are very useful in preventing slight shocks which necessarily interfere with accurate work. With a half-ounce syringe filled with a four or five per cent. solution of cocaine the urethra is gently and slowly distended. As soon as the anterior urethra is full one should wait for about a minute, and then very slowly inject the remainder so that about every ten seconds a little of the solution will get past the cut-off muscle and anesthetize the posterior urethra, which is the part most sensitive. If there is great irritability of the bladder a second or a third syringeful may be similarly used, as there is practically no danger of poisoning, notwithstanding the dread which some writers have. In any case, the most of the drug is gotten rid of by the next procedure, which consists in passing a soft rubber catheter some three minutes after the cocainizing process. It is well to have a gum elastic catheter ready, as it sometimes happens that the Jacques variety cannot be made to enter the bladder. With the catheter in place the bladder is washed out usually with 1:30 warm boracic solution. If the urine is moderately clear two or three washings are sufficient, but if there is much muco-pus repeated cleansing is necessary to ensure a clear medium. When satisfied that the viscus is clean enough about five to seven ounces of the fluid are left in, the catheter withdrawn, and the cystoscope, previously prepared, is inserted.

Various lubricants for the instrument are advised, the three essentials being transparency, an oily substance and one easily ren-

dered sterile. Personally, I use pure glycerine with sufficient bichloride of mercury powder to make a 1:1,000 solution. In passing the instrument the utmost gentleness must be exercised, and here the experience gained in the post-mortem room will be invaluable. If the patient be in the lithotomy position the legs should be brought down until the cystoscope has been passed. There are two stages in the passing of the instrument. The first includes the insertion until the beak strikes the posterior part of the bulb, during which period the long axis of the shaft should be roughly at right angles to the patient's body, the beak being directed against the anterior layer of the triangular ligament. In the second stage the posterior urethra is traversed. The instrument should be very slightly withdrawn and a finger on the perineum gently presses the beak against the opening in the triangular ligament, when he will feel it enter the membranous urethra. The ocular end is then gently depressed between the thighs and at the same time very carefully pressed on into the bladder. The electric connections are then made, and the operator seats himself on a low chair.

In the female the technique is very much simpler. The vulva should be cleansed by the nurse before coming to the table. The urethra, and especially the neck of the bladder, which is the most sensitive part, being cocainized by means of a female glass catheter to which is attached a rubber bulb.

When it is desired to catheterize a ureter, the opening when found must be viewed as near as possible at right angles. The catheter should fit the channel closely, in order that there should be a minimal leakage of the medium. Usually a No. 7 French will meet the requirement. These may be sterilized by boiling for five minutes, provided a towel be wrapped around them, or immersion for the same length of time in a 2% formalin solution will suffice. If the latter method be used the formalin must be carefully washed off, else the fumes will so irritate the eyes as to make the examination impossible. If one wishes to avoid all danger of infection it is advisable to use a new catheter upon each occasion. It is very convenient to have an aluminum mandrin passed through the catheter, care being taken that its end reaches only to within three or four inches from the catheter eye. Unless this precaution is taken one may find that the catheter buckles when trying to pass it onwards into the kidney.

The cystoscope enters the bladder with the prism directed towards the upper surface, and floating upon the fluid will be seen an air bubble of greater or less size. This has been introduced with the boracic solution, and comes away at the end of voluntary micturition, and is of no importance. By turning the beak to either side

the lateral walls become visible, while the trigone and posterior walls are seen when the beak is directed downwards. Normally the mucosa is of a reddish-yellow color, with fine branching blood vessels not unlike the fundus of the eye. The surface is clear and has a glistening appearance due to the highly refractory surface. The trigone is smooth and darker in color than its adjacent areas, from which it is sharply marked off. Its base coincides with the inter-ureteric bar, which usually stands out definitely and distinctly and presents at either extremity the ureteric orifice. If the beak be pushed somewhat farther back after examining the inter-ureteric bar, the characteric difference between the trigone and posterior wall will become evident, the latter showing the usual color but presenting numerous fine trabecula, with very often minute saeculations between—a picture in miniature of an hypertrophied bladder following long-standing urethral obstruction. Most commonly the ureteric orifices appear as more or less transverse slits about an eighth of an inch in length, and of a distinct red or deep pink color. The surrounding area is several shades lighter in color, and a vessel can often be traced directly into the opening. In some cases the edges appear to be slightly thickened, but if that be the normal then one should find the opposite opening in a similar condition. Rumpel's artist paints the normal ureteral orifice as of semilunar shape, and not upon one occasion but upon all. Unless a lens of different make is used in his instrument this is certainly an error. True, it may appear more or less oblique, instead of transverse, but that depends entirely upon the relative positions of the instrument and the opening. If the bladder be only moderately distended the orifice may present as an opening upon a truncated cone with the base apparently directed upwards and inwards. Watching one of these openings, one will observe from time to time—about once every ten or twelve seconds, the time varying considerably in health—that the area immediately surrounding the orifice swells up and draws itself together. Suddenly the slit opens till it assumes an oval contour and a swirl of fluid is emitted, producing eddies in the medium similar to the injection of glycerine into water. During the efflux, which lasts about two seconds, the opening and extremity of the inter-ureteric bar are forcibly pushed forward so as to approach the cystoscopic prism.

The older writers, and some modern authorities as well, were in the habit of giving a considerable number of contra indications to the use of the cystoscope, including among the number prostatic enlargement, tuberculosis of the bladder and the various forms of cystitis. Keyes says that the cystoscope should not be used for the

diagnosis of prostatic hypertrophy, cystitis or stone in the bladder. The instrument, he believes, irritates tuberculosis of the bladder even more than do local measures, and he would only use the cystoscope for catheterizing purposes, tumor and in obscure cases for diagnosis. At the present time most cystoscopists are unable to agree to these objections, finding by experience that the fears of these writers are in most instances groundless. Personally, while I do not advocate a cystoscopic examination every time a patient complains of a little frequency and pain on micturition, I recognize no contra indication whatever, provided, of course, the individual is in a sufficiently healthy state to stand the necessary manipulation. In acute cystitis there is practically never any indication for its use, but even then it may be done without any ill effects to the patient if one carries out the procedure in the routine gentle and aseptic manner. If one were absolutely sure of the diagnosis, then there should be no need for using the instrument at all, but in these days of scientific accuracy every method which will increase our knowledge of diseased conditions and as a consequence enable us to give better treatment to our patients should, whenever practicable, be adopted; and I shall attempt to show later on that there are many instances of daily occurrence where individuals are supposed to be suffering from straightforward diseases and cystoscopy conclusively proves them to have an entirely different malady.

Having thus briefly referred to the technical aspect of the subject, let us now deal with some of the more common pathological conditions which are rendered evident by cystoscopy, first directing our attention to cystitis.

If one examines a bladder in the declining stage of an acute cystitis, the first thing which attracts the attention is the deep red color of the mucosa. The vessels themselves are not so evident as under normal conditions, owing to the darker surface upon which they ramify. About the neck of the organ the mucous membrane is swollen and appears velvety, with here and there more irregular projections. There may be hemorrhagic patches, and these appear as dark blotches. That they are due to blood extravasations and not to congestion is evident from the absence of vessels and by their showing no change in color when the viscus is further distended. Floating in the medium or partly attached to the wall may be seen streamers of grayish denuded epithelium or muco-pus which move about with every wave transmitted to the solution by the cystoscope or respiratory movements. The outline of the prostate or the internal meatus in the female is distinctly blurred and irregular—a

proof that the entrance to the urethra is considerably swollen and infiltrated.

In the chronic forms very similar pictures, but in a much milder form, are seen. Here, however, the most marked changes are frequently found about the neck of the bladder, and it is at this spot that the patient feels the most pain when the instrument is being passed.

A much more important subject for our purpose is ulceration of the bladder. Fenwick has described cases of simple solitary ulcer. It generally lies behind a ureteral orifice, has a sloughy base, and is about the size of a twenty-five-cent piece, and surrounded by normal bladder wall. Such an ulcer runs a very chronic course, being later followed by cystitis and renal symptoms just like a primary tuberculosis of the bladder, and, in fact, many believe them to have their origin in the tubercle bacillus. When we come to deal with true tubercular ulceration, however, there is less difference of opinion. Formerly it was doubted whether tuberculosis ever affected the bladder as a primary infection, but cystoscopy has demonstrated in conclusive form that it does, although it is by no means of common occurrence. The ulceration is usually present on the postero-superior surface. It may first show as a sharply defined dull red patch the size of a five-cent piece, and if the patient has been given methylene blue an hour or so previously these patches will be stained green, demonstrating that the epithelium has been shed. The color of the patch is due to infiltration, and here and there a curled up flake of cast-off epithelium or muco-pus may be seen attached to the patch. At this stage the surrounding bladder wall appears normal, nor is there anything suggestive of disease in the ureteral orifices. According to Pumpel, the primary lesion may show as more or less round areas about the size of pinheads of a pale yellow color and surrounded by a red areola. These certainly appear in generalized miliary tuberculosis with vesical involvement, but apart from that I think they are very rare indeed. It is to be noted, however, that it is the hyperemic zone surrounding the yellowish spot that is significant, as yellowish white nodules are of common enough occurrence in normal bladders, and probably due to distended glands or lymph spaces. If a bladder with primary tuberculosis be examined months later, when renal complications are present, the cystoscopic appearance is exactly similar to that found in a severe secondary infection. The following is a case in point:—

Mr. S., age 32, referred by Dr. J. M. McCormack, complained of frequency and dysuria for months. Urine contains much pus;

some blood but no albumen after filtering. Cystoscopy May 1910. Both ureteral orifices normal. On trigone just behind the internal meatus is an ulcer about the size of a five-cent piece. Bladder much congested about. On examining per rectum the prostate was nodular and tender, a similar condition being found in the right vesicula seminalis. There were old scars in the anterior triangles of the neck. Diagnosis: tubercular ulceration of the bladder, probably secondary to the same condition in the prostate.

The bladder changes in tuberculosis secondary to a renal infection vary tremendously according to the stage of the process. In a moderately severe case one would find the ureteral orifice corresponding to the affected kidney, patulous and surrounded by an area of ulceration with adherent debris. Farther forward on the trigone one will probably see another ulcer about the size of a ten-cent piece, while the trigone will be more or less edematous. The opposite ureteral orifice will probably show slight swelling of the lips, but without gross changes in its surroundings. The bladder will be contracted, and even under the influence of a general anesthetic will with difficulty hold the necessary amount of medium; and this holds after the corneal reflex has disappeared. The ureter from the affected side will be seen to emit from time to time a quantity of turbid urine, but instead of being a vigorous efflux it will simply dribble out. The opposite ureter may be overactive. Examples.—

Mr. S. (same patient referred to above). Examined May 17th, 1911, one year later. Urine now contains much albumen in addition to the pus. Cystoscopy—Right orifice very much reddened and angry-looking; lips swollen. Left fairly normal. Trigone is ulcerated but the denuded areas do not reach to the ureteral orifice, there being a normal area of bladder mucosa intervening except for the edema which extends over the trigone. The right ureter was catheterized, the specimen showing plenty of pus, albumen and some blood. Diagnosis—Tuberculosis of right kidney consecutive to the bladder involvement, and it is proposed to do a nephrectomy.

The following is a typical example of bladder tuberculosis, the primary focus being in the kidney:—

Miss H. (referred by Dr. H. B. Anderson). Age 24. Urine contained pus and occasionally some blood, with variable quantities of albumen. Chief complaint was dysuria and frequency of micturition. Cystoscopy in November 1909. Bladder holds with difficulty 4 ounces. Right orifice is holed and surrounded by extensive ulceration with adherent debris. Pus can be seen coming from the open orifice. Left opening shows slight thickening of its lips,

and it is overactive, giving forth a brisk efflux eleven times per minute. The trigone presented a most remarkable appearance towards the right side. There were mulberry-like projections, some as large as a cherry, others about the size of a pea, and of a white, gelatinous color. When examined from the side it was apparent that they were semi-translucent, and delicate blood vessels could be seen ramifying through them. Dr. Parker, the house physician, was able to demonstrate tubercle bacilli in a catheterized specimen, so that a diagnosis of tuberculous right kidney was easily made. Dr. McKeown, assisted by Dr. Wallace Scott, subsequently removed the organ, which was a typical example of the suspected lesion. The patient made a good recovery and has subsequently married. Another condition, beautifully illustrated by the same case, is what is known as bullous edema of the bladder, which takes the characters described above in the mulberry gelatinous masses. Kolischer first described this condition in the female bladder, his theory being that it was due to stasis from adjacent inflammatory processes. It is not peculiar to reno-vesico tuberculosis, as it has been reported in pyelitis following stone in the kidney. The polypoid masses, which consist merely of very edematous mucous membrane, look very much indeed like new growths, and Fenwick relates that he has had difficulty in restraining certain surgeons from removing them with the knife.

When we come to discuss tumors of the bladder we have to deal, for all practical purposes, with only the papillomata and the carcinomata. Papillomata may be pedunculated or sessile. The former present as leaf-like processes—some long, others short—of a fawny color, with a central vessel plainly visible. The longer leaflets float about in the solution. The stalk is nearly always attached near one of the ureteral orifices. The bladder wall immediately around the stalk appears dark because it is in the shadow produced by the overhanging growth; otherwise the bladder will be normal unless in a later stage when cystitis has supervened. The initial symptom in most cases of bladder tumor is painless hematuria, carcinomata manifesting its presence in about one-third of the cases as an irritability of the viscus; and it is in these instances that the cystoscope is invaluable. If the hematuria is accompanied by albuminuria of such an extent that the blood cannot account for it the natural diagnosis is some primary renal condition, whereas the real origin of the trouble lies in a growth which is pressing upon the mouth of the ureter. It is never wise, in most instances at least, to express a very emphatic opinion as to the malignancy of a bladder neoplasm as seen by the cystoscope. The

more papillated the growth the more likely is it to be benign, while if lumpy and irregular, and especially if it is ulcerated, there is strong probability of its being malignant. The nature of the growth, however, is not the main consideration, since in eighty per cent. of the papillomata malignant tendencies are taken on, but what can be learned with more certainty is the extent of the growth and an opinion arrived at as to whether it can be successfully removed. The following is an illustrative case:—

Miss C. Aged 50. Referred by Dr. H. B. Anderson. Came complaining of hematuria. Urine contained considerable albumen at times, blood and a few pus cells. Cystoscopy—Bladder faintly congested. Right orifice normal and secreting regularly. Left seems normal in length, but the lips are thickened and of a darker color than normal. Immediately behind the left opening is a sessile tumor about five-eighths of an inch in length by rather less than one-half an inch in width. Its edge reaches to within a sixteenth of an inch of the mouth of the ureter. The growth is slightly nodular and has an incrustation of phosphates; when touched with the instrument it is seen to bleed readily. Diagnosis—Sessile carcinoma. No operation was performed and patient returned to her home.

In probably one hundred per cent. of cases of tuberculosis of the kidney the cystoscope will demonstrate some pathological condition about the ureteral orifice by the time the patient comes under observation. It is rather remarkable how many of these come complaining only of bladder trouble. In about half the cases no complaint whatever is made of renal pain, and in only one third of the instances do the patients complain of any considerable amount of kidney pain. It is probably on this account that many of these patients are for long periods treated for cystitis, and, as one would expect, without any permanent benefit. Dickenson years ago drew attention to this fact, going so far as to state that with pus in the urine and no bladder symptoms the disease is not tubercular. In the early stages the affected orifice may show nothing but slight swelling of the lips, with some blurring, yet with pyuria this is sufficient to put the operator upon his guard. Later on, when the orifice appears as a dark hole set in a whitish background, with or without ulcerated areas in the neighborhood, a dilated and atonic ureter may safely be diagnosed. Nevertheless, to dogmatize as to its cause from the appearances alone would be folly, although tubercle and calculous pyelitis are the only common causes of such a condition. An example of an early tubercular infection of the kidney is the following:—

Mr. McK. Aged 40. Referred by Dr. H. B. Anderson. Patient was sent from Western Canada to consult Dr. Anderson regarding swelling of the right testicle which had been causing trouble for some four years. Of late he had some dysuria and frequency, the urine containing some pus and a trace of albumen. Dr. G. A. Bingham removed the diseased organ, which was undoubtedly tubercular, after which I cystoscoped. Bladder was slightly congested. Right orifice normal. Left swollen, congested and pouting. A catheter inserted into left ureter drained off urine containing pus, a few blood cells, which were probably traumatic in origin, and a trace of albumen. Diagnosis—Early tubercular left kidney. No operation upon the kidney was performed.

The following case shows a much later stage of the same condition:—

Miss N. Aged 24. Referred by Dr. J. L. Killoran. Patient came to her physician some three years previously, complaining of painful micturition and great frequency. Gave no history of renal pain of any kind, and in consequence was treated for cystitis, but without any beneficial effect. Urine contained albumen and pus in abundance. Cystoscopy showed a much congested bladder, the irritability being such that considerable pain indeed was experienced in holding the necessary amount of boracic solution. Both orifices were thickened and dark red in color, with ulceration around each, especially on the right side. The diagnosis was therefore made of tuberculosis of both kidneys. No operation was advised.

Fenwick divides the ureteral appearances in stone in the kidney into three stages:

(1) Stone in the pelvis, with dilatation of same, producing slight elongation of the lips, with congestion—furrowing.

(2) Calculous pyelitis—erosion and later ulceration of the orifice, congestion of the trigone and a turbid efflux.

(3) Entire cessation of the life of the kidney, with holing of the orifice and ropy pus emerging therefrom.

While it is true that some excellent observers maintain that it is possible from the bladder appearances to differentiate a descending from an ascending infection, I believe that the majority of cystoscopists do not make any such claim, and, in fact, recognize that it is as a rule impossible. Fenwick, for example, believes that a ureteral orifice shaped like the opening into a slipper means an ascending infection. Personally I think it of considerable importance as an evidence in favor of an ascending complication if one can note a relatively normal area between the abnormal orifice and an ulcer,

for example, on the trigone. It is generally admitted too that from the cystoscopic appearances alone one is unable to differentiate a calculous pyelitis from chronic reno-vesical tuberculosis. In fact, any irritant descending from the kidneys will, I believe, produce the erosion and congestion with elongation that are so frequently associated with calculous or tubercular pyelitis. A few days ago I was asked to catheterize the right ureter of a man who two weeks previously had sustained a rupture of the right kidney, with pronounced hematuria, and the orifice presented an appearance of what I am accustomed to regard as typical of early tubercular kidney. Curiously enough, the catheter in this instance failed to draw off any urine. It is important to note that in the severer forms of calculous pyelitis one invariably has pronounced bladder symptoms, and this too, as in tuberculosis, without any gross involvement of that viscus. It is also to be observed that in many instances as the bladder condition becomes more pronounced the renal pain subsides, and may even be forgotten. The following is an illustrative case:—

Miss McM. Aged 40. Referred by Dr. Killoran. Consulted physician because of frequency, pain and inability to hold the urine, which kept dribbling away. Was treated for months for cystitis. Had forgotten about her renal pain. The urine showed some pus and a trace only of albumen. Cystoscopy—Bladder only slightly congested. Left orifice normal. Right slightly furrowed and elongated, with darkened lips. Right ureter catheterized and pus with a mere trace of albumen was found in the collected urine. Diagnosis—Tubercle or stone in right kidney. Patient refused operation and left the hospital. She returned five months later under the care of Dr. E. E. King, who kindly allowed me to see her again on May 4th. I again examined her while she was on the table prepared for a nephrotomy, and confirmed the previous opinion. Some ten or twelve uric acid calculi were removed from a dilated pelvis, the ureter at the upper end being likewise dilated and thickened. The patient is making an excellent recovery.

In this connection I might refer briefly to a very interesting case referred by Dr. G. Silverthorn. Mr. M. Aged 42. Complained of pain in the right loin, with frequency. Urine contained abundance of pus. Cystoscopy—Bladder moderately congested and with difficulty holds the necessary four ounces. Left orifice normal. Right is holed, and at intervals long ropes of grayish white pus are seen to be pushed therefrom. These rope-like masses emerge in a spiral manner and curl up on the trigone. Diagnosis—Suppurative pyelitis, with a badly crippled kidney. Dr. Silverthorn

operated and opened a perinephritic abscess but could make out no connection with the genito-urinary tract. The patient recovered. This case is an illustration of Fenwick's third stage of calculous pyelitis, with death of the kidney as evidenced by ropy pus, but in this instance the kidney was apparently very little damaged.

The next condition to which I wish to refer is a very rare one indeed, namely, a tertiary syphilitic lesion of the kidney. The patient, Miss W., whom I saw with Dr. R. E. Hooper was a young girl, aged seventeen, who came complaining of swelling of the ankles and feet. She was admitted to Grace Hospital and the urine examined by the house surgeon from time to time was reported to contain pus and albumen. The swelling frequently extended to the back, and there was occasionally some swelling of the abdomen. Over the left sterno-clavicular region was a typical gummatous periostitis, and on questioning her, she gave a history of sore eyes lasting several weeks at the age of fourteen. On examining the urine more carefully it was found that the reported albumen was in reality an albumose, thus further strengthening the diagnosis. She was given mixed treatment and the periostitis quickly subsided. Some three weeks later I cystoscoped, finding a normal right orifice, while the left showed a congested and somewhat elongated opening with pouting lips. Both kidneys were palpable, but the left only was tender. A diagnosis of left renal syphilis was made. When the patient left the hospital some weeks subsequently she had nearly recovered.

It is common knowledge that the presence of blood in the urine may be the only symptom of either bladder or kidney disease. Probably the most common cause of symptomless hematuria of renal origin is chronic interstitial nephritis, and apparently the bleeding may in this disease come from one side only. It may be the initial symptom in tuberculosis of the kidney. In renal tumors there is usually nothing characteristic about the cystoscopic picture, catheterization being usually required to ascertain the affected side. In a case of malignant kidney which I examined, Mrs. P., under the care of Dr. McKeown, a jet of blood could be seen issuing from the left orifice, the corresponding kidney being very much enlarged. There was no operation. In another case which I saw with Dr. C. A. Page, the complaint of the patient was simply hematuria. Cystoscopy showed a normal bladder with the exception of the left orifice which was lengthened and the lips considerably swollen. A left renal lesion as the cause of the bleeding was evident, but the patient was lost sight of. Even where renal pain accompanies the hematuria one cannot be sure as to which side is

affected, for a considerable number of authentic cases are recorded in which the pain was referred to the sound side, so that a cystoscopic examination should never be omitted if one desires to be absolutely sure of the diagnosis.

As far as stone in the bladder is concerned the sound will generally be sufficient for the establishment of the diagnosis, but should the stone be lying in a diverticulum or a post-trigonal or prostatic pouch it is very apt to be missed. Again an ulcer with a thick phosphatic deposit, especially if part of a tumor, may be very deceptive to the sound, and in such cases a cystoscopic examination would reveal the true state of affairs. From the appearance of the stone an idea of its nature may be formulated, and if the crushing operation be deemed advisable the instrument can be used to see that none of the crushed pieces remain behind to form the nucleus of another calculus.

As in the case of vesical calculus, so with prostatic hypertrophy, the diagnosis being as a rule easily made without a visual examination of the bladder. In a small percentage of cases, however, the prostate as felt by rectum is not enlarged, and yet the symptoms of prostatic obstruction are present. The cause will most probably lie in an enlarged middle lobe, which can be very readily made out on cystoscopic examination. Before attempting to pass such an instrument, however, the condition of the patient should be most carefully considered with especial attention to morning nausea, and considerable thirst for such individuals often have urine of low specific gravity, and any manipulation is liable to be followed by suppression. Rumpel states that the cystoscope plays a very important practical role in the diagnosis as well as the indications for treatment of prostatic hypertrophy, nevertheless its use is much circumscribed by the difficulty which must often be met of passing the instrument without using undue force. In malignant prostates that are at all advanced, any attempt at cystoscopy would be positively harmful. Before one can obtain any knowledge as to prostatic enlargement he must become familiar with the normal prostatic pictures. These are well exemplified by Young in Keen's surgery, but it is best for each cystoscopist to make drawings of his own representing the various appearances with the beak turned in corresponding directions, with the field almost shut off and with only one fourth. If the contour deviates from the normal one can readily interpret his findings. The following is a good example: S. V., aged 60, was sent to see Dr. McKeown regarding frequency and pain with difficulty. Per rectum the prostate was only slightly enlarged. The urine contained much pus, some albumen, a few

epithelial cells, small quantity of blood and had a specific gravity of 1,018. The radiograph showed no stone. Cystoscopy—bladder wall very dark in color. Marked trabeculation. Left orifice somewhat congested, but right showed extensive ulceration with a turbid efflux. There was a middle lobe projecting into the bladder. Dr. McKeown, with the assistance of Dr. Scott, immediately opened the bladder suprapubically and removed the middle lobe projection which was about the size of a cherry. Patient can now urinate as well as ever, although he still has a small fistula above the pubis, while his general health is most satisfactory.

205 Bloor E., Toronto.

Discussion.

Dr. Warren Jones, Toronto.—Method of preparation. Cocaine sterilization 2% in bladder for four minutes, allowing some to go into the prostatic urethra.

A pillow should be placed under buttocks.

Emphasis on careful rectal examination. Palpation of lower ends of ureters.

Its value in cases of symptomless hematuria—may see the side from which the blood comes.

It is of value in tubercle of kidney where an operation is contemplated to find out if the other kidney is efficiently working.

Dr. E. E. King, Toronto.—The cystoscope is really an instrument for the expert, not for the novice. Warned against the use of the cystoscope as a routine examination. All other means of diagnosis should be exhausted, especially in cases where ulcer or tuberculosis is suspected. Technique should be mastered before any attempt to catheterize the ureter is made. One should familiarize himself with the appearance of the normal bladder, the situation of the normal ureters, and the appearance of the mucous membrane with all degrees of distension of the bladder. Many errors are made in diagnosis by not having this knowledge, and folds of the mucous membrane are frequently mistaken for tumors. The examination cystoscope should be the one of common use, and the catheterizing one for selective cases.

Dr. Nagle.—Re discussion of value of cystoscope.

1. Agree with Dr. Jones and Dr. King that the technique of cystoscopy is extremely difficult, and where possible these examinations should be left to men who have had special training and do this work constantly. In the two large Montreal hospitals this work is done by specialists.

2. Re loss of fluid during insertion of instrument mentioned by

Dr. King, would ask him if he has seen the Brown-Berger double catheterizing instrument with obturator which admits of addition or withdrawal of fluid without removing the instrument.

Geo. Ewart Wilson.—I agree with Dr. E. E. King in not advising every practicing surgeon to obtain a cystoscope, as the technique can only be gotten by careful work in the post-mortem room, and much injury thereby results. It should be an adjunct and not be used to take the place of other well recognized methods. I cannot agree with Dr. Jones, however, in regard to tubercular kidney, as one of its greatest benefits has been the early diagnosis of that condition, and in practically all cases when the patient comes to the surgeon the urethral orifice will make evident the disease.

Nausea.

Barnes (*Tex. St. Jr. Med.*) says that the very best treatment of nausea and vomiting following chloroform and ether anesthesia is the open-air treatment—plenty of fresh air. It should be supplied in large volume and kept moving. On the completion of the operation the patient is placed on a cot immediately, wrapped in blankets, the face always exposed to the external air and external heat applied.

Acute Gonorrhea.

Russell (Med. Council) lauds a 1 per cent. solution of thallin sulphate in all cases of acute gonorrhea. It rapidly relieves the inflammation and changes the thick pus discharge into a thin, watery one in from one week to ten days. It should be used from four to six times a day.

Chordee.

Myers (*Am. Jour. Derm.*) says chordee is best overcome by the following suppositories, one to be inserted in the rectum on retiring, repeated during the night if necessary: Extracti opii, extracti hyoscyani, of each grs. v.; olei theobromati gr. 5. For five suppositories.

Broncho-Pneumonia.

Perrier of Fribourg (*La Revue Suisse de Med.*) treats bronchopneumonia in children by injections of colloidal silver, which occurs in two forms, collargol and electrargol, the latter being the one employed and which can be given subcutaneously, intramuscularly or intravenously without danger.

*AIDS IN THE DIAGNOSIS OF SURGICAL DISEASES OF KIDNEY AND BLADDER.

By J. K. McGregor, M.D., Hamilton, Ont.

It is my purpose to draw your attention to information which may be derived from direct methods of examination rather than from the case history.

Recent improvements in the X-ray and the cystoscope and the technic of their use, have opened up fresh fields of diagnosis, and the surgeon is given an earlier and more accurate picture of the disease to draw his conclusions from.

A modern X-ray apparatus will show a stone in the urinary tract whatever its chemical composition in 90% of cases.

It is to the cystoscope, however, we owe the most, for it is by this instrument we reach the kidney by catheterization and gain many kinds of useful information.

Numerous patterns of scopes are in use, many of them commendable. The Europeans mostly use a lens scope, and the Americans a direct vision one. It is a good plan to have both varieties on hand. The Lewis universal instrument combines the two in one instrument. Personally, I use an Elsiner and a Nitze, and find that they cover most requirements.

Cystoscopy.

Preparation of Patient.—A general anesthesia is rarely needed. ½ gr. morphia may be given hypodermically before examination. An opium suppository may be used. As local anesthesia I use alypin, 1½ grs., several tablets being applied by an applicator to the posterior urethra. Novocaine is also used for this purpose. The meatus may require a 20% cocaine solution, and it may have to be incised.

The patient is in the recumbent position, hips slightly elevated. The parts washed and the rest covered with a sterile sheet. All instruments, catheters, etc., are boiled, except the scope, which is sterilized in a strong carbolic solution. When the instrument is introduced, which can usually be accomplished without much trouble, the water is turned on, the bladder well washed out, the window inserted, the light turned on the viscus inspected in detail. The meati are located, and calculi and foreign bodies searched for. A calculus is very easily seen and diagnosed. The same thing may

*Read at annual meeting of Ontario Medical Association May, June, 1911.

be said of the various forms of cystitis. They become familiar after a short experience with the instrument.

The diagnosis of vesical tumors can be made by the cystoscope alone. With its aid we may accurately determine their size, location, character, number, and with a forceps snip off a piece for microscopic examination.

The commoner forms are the papillomata and the carcinomata, and a less frequent form the sarcoma. The liability of these papillomata to recur after removal has led many to believe them malignant.

Of five vesical tumors I have seen in my own practice, four have shown malignancy microscopically. Young, of Baltimore, says that 90% of vesical tumors in patients over 50 years of age are malignant. The Mayos have had nearly the same experience. They say that of the cases which are approached by the transperitoneal route, 10% have already metatasis in the liver at the time of operation.

Many authorities, however, notably Bier and Keys, of New York, consider these growths mostly benign, and during the last year have been treating them with the high frequency current.

The chancroidal tumor is fortunately uncommon, for it gives so few clinical symptoms that the surgeon always arrives too late. It shows an infiltrating base, which can be felt per rectum, and around its base necrotic areas are seen on inspection. The papilloma or carcinoma give a characteristic appearance. They may be single or double, pedunculated or warty. The villi may usually be seen to float back and forth in the water currents, and they have been said to look like "finger ends." The tumor usually bleeds when touched with the beak of the scope. Necrotic areas may be seen, and they are fresh evidences for malignancy.

If we are to believe with Mayos, Young and others that these tumors are mostly malignant, we cannot use the cystoscope too early in a case of hematuria, especially in an adult. The examination causes little inconvenience, and the information gained is accurate.

The value of meatoscopy, or the appearance of the ureteral opening, is of great value when combined with other signs. Thus tuberculosis of the corresponding kidney will likely be shown by a red swollen orifice, hanging from which may be necrotic tags. The same is true of pyelitis. The negative evidence should, however, not be taken for too much. Any blockage of the ureter will show a gaping of the meatus.

The character of the output, as observed through the scope, may

be seen to be turbid or hemorrhagic if pus or blood is present in any quantities.

Ureteral catheterization is fairly easily accomplished in a normal bladder. Difficulty may arise in cases of cystitis where the meati have been drawn out of their normal position or are hidden behind an elevated trabecula. Hemorrhage and clots may make the procedure very troublesome.

In the passage of the catheter information may be gained of the presence of complete or partial obstruction in the ureter. This is usually caused by stone. I have seen complete obstruction, however, caused by tubercular ulceration. Dr. Kelley uses wax tipped catheters for location of calculi.

Zebra catheters marked in centimeters to estimate the length of catheter passed will show an obstruction or a dilated pelvis, 32-38 centimeters being the normal length. In radiographic work the catheter carries a metal stillette. Most recent works show plates where shadows some distance from the wire stillette might have been mistaken for uretral calculi had not the stillette been used. The output of the two kidneys is collected in separate sterilized test tubes for macroscopic and microscopic appearances. Examination of the sample for T. B. should only be done by an expert.

Note should be made of the way the drops come from the catheter. When a hydronephrosis is drained the drops come fast at first and then slowly and without the little jerk with which the normal kidney ejects its contents.

The aid acquired by the forcible distension of the renal pelvis by means of a solution injected through the catheters is striking. A solution of boracic acid colored with methylene blue is used. The coloring is done to check any back flow along the outside of the catheter. The solution is slightly warmed, sterilized and introduced with a graduated sterilized syringe.

Normally the renal pelvis will contain from 7-15 c.c. According to Braasch "A renal pelvis which holds less than 3 c.c. indicates a contracted pelvis, usually stone. A pelvis containing between 25-40 c.c. indicates some nervous disorder. A pelvis containing between 50-150 c.c. indicates hydronephrosis, which can usually be relieved without a nephrectomy. A pelvis containing more than 150 c.c. will usually require a nephrectomy." The injection should be made slowly and stopped as soon as pain is felt.

The relationship between the pain produced and the pain usually felt by the patient should be carefully noted. Upon this sign alone I have seen hydronephrosis thrown out of a differential

diagnosis and operation later on reveals the true condition as a post cecal appendix.

The functional activity of the kidneys, as estimated by the examination of the secretion from the separate sides, can be accomplished by several methods, and should always be done when a nephrectomy is contemplated.

Of the methods in vogue:

Cryoscopy, or the estimation of the freezing point of the urine, has been of great interest to scientific workers. Its value is doubtful and its technique too elaborate for practical work. It has been tried and discarded by most authorities.

The injection of indigo carmine, 0.16 grams in normal salt solution, preferably into the gluteal muscle, will normally show in the urine in from 10-12 minutes. If after this time only a green color appears and is not intensified, it demonstrates some functional change in the kidney. The length of time it takes for the color to appear and the intensity of the color being the important points in the test.

The phloridizin test or the production of temporary glycosuria by means of an injection of 0.01 gram phloridizin in aqueous solution is the one most used. The urine is examined 10 minutes after the injection and then every 5 minutes. Normally sugar appears in 10 minutes. The longer it takes over this time the more should we figure on a functional derangement in the kidney of that side.

The estimation of the electrical conductivity of the urine is also too elaborate a test for practical use.

Pyelography or the radiographing of collargol injections into the ureter and renal pelvis was first suggested by Prof. Voelcher, of Heidelberg, four years ago.

The application of this scientific procedure owes its advancement to Dr. Braasch of the Mayo clinic, who has suggested its use in the various kidney lesions and also in their differentiation from extra renal conditions. (It is by courtesy of Dr. Braasch and the Drs. Mayo that I have some of their plates to show.) The patient is cystoscoped, catheterized and a 5 to 15% solution of collargol injected slowly while the radiograph is being taken. The injection is stopped as soon as pain is felt. No harm is done by the injection. In case of an operation following, union by first intention is not interfered with. A large hydronephrosis may take several ounces. It will show a large, clear shadow with a distinct margin. A pyelitis with abscesses invading the cortex will show an irregular margin to the collargol shadow. This may be seen in tubercular kidney. The various dilatations of the ureter, whether acquired or

congenital, may be easily mapped out and solitary kidney and malformations diagnosed. A stone in the pelvis will show but dimly through the collargol shadow or be altogether obliterated. Cortical calculi, however, are seen, and their relative positions definitely defined.

It is in the differentiation between renal and extra renal shadows that the most valuable information is acquired, such as intestinal tumors, hypernephromata and especially gall stones.

Even where a gall stone shadow is in such a position as to appear to be renal, stereoscopic radiographs have been used within the last year, which show the relative positions and clears up the diagnosis.

The advances along this line, together with the fact that year by year more surgeons are giving attention to the subject, has brought us to that point where we no longer excuse those lapses in urinary diagnosis which were formerly accepted or condoned as necessarily incidental to medical practice.

Stab Wound of Heart.

In connection with the proposed treatment of air embolism by heart puncture, as suggested by Blair and McGuigan, the case of Erdman, New York (*Med. Record*), is interesting. This was in a male of 21 years. A hole was found in the right ventricle, which would admit the gloved index finger. The patient was seen by the surgeon three and a half hours after injury, was put back to bed in thirty minutes, the time for locating wound and stitching same, and in spite of a lobar pneumonia and pneumothorax, made a good recovery.

Vaccines in Gonorrhea and Its Complications.

Geo. R. Livermore, Memphis, says in his experience gonococcic vaccine is worthless in acute or chronic gonorrhea. Some of the complications, however, sometimes yield promptly. He mentions epididymo-orchitis, arthritis and prostatitis. In women he has seen several cases benefitted by vaccine.

Intravenous Saline Infusion.

Dr. George J. Saxon (Philadelphia) states it is inconvenient to make an incision to isolate a vein, and that it is far more simple and convenient to merely introduce through the sterilized skin over a vein a needle attached to rubber tube and funnel.

*REPORT OF A CASE OF ECTOPIA VESICAE, WITH OPERATION.

By J. B. Coleridge, M.D., Ingersoll.

This case which came under observation early in the last year was one of typical extroversion of the bladder. The symphysis pubis was absent and the rounded ends of the horizontal rami of the pubic arch were plainly evident on either side. There was an angry patch of mucous membrane representing the posterior wall of the bladder, upon which could be plainly seen the openings of the two ureters, from which one could observe jets of urine being alternately ejaculated. The penis was most rudimentary and presented a condition of epispadias. The testicles were normal and healthy, as was also the scrotum.

There was no umbilicus, but there was a well marked congenital ventral hernia.

The family history of the boy was good and throws no light on his condition. The boy was sixteen years of age at the time of the operation. In the operation which I performed on January 21st, 1910, I followed the ingenious method of transplanting the ureters into the rectum by the extraperitoneal route as devised and successfully carried out by the late George Peters, of Toronto.

In the preparation of this patient I administered methylene blue for twenty-four hours previous to the operation for the purpose of coloring the urine, both at the time of operation and subsequently.

After the usual preparation of the patient and the anesthetic had been administered the sphincter ani was well stretched and the rectum washed out with boric acid solution. A sponge with a tape was tucked as high up in the bowel as possible to prevent any passage of fecal matter, and also to serve the purpose of raising the bowel toward the bladder.

The next step in the operation, as suggested by Peters, was to introduce into each of the ureters a soft rubber catheter about number five (English), having first cut off the part containing the eye, so as to allow the urine to flow freely into the catheter. This was done, but I found that despite the apparent simplicity of the procedure it proved a very tedious part of the operation, so much so that were another case to come under my care I would content myself with passing a probe into the ureters to be used as a guide

*Read at meeting of Ontario Medical Association, Niagara Falls, May-June, 1911.

while dissecting them free and introduce a large drainage tube through the anus instead of bringing the ends of the catheters out as will be later described.

Having passed the catheters into the ureters they were caught through the extreme ends of the urethral papilla with silk to prevent their slipping out.

The distal end of the ureter with goodly rosette of bladder, muscle and mucous membrane was now dissected free, the catheter or probe as above suggested serving as excellent guide to their position. The advantage of dissecting out the rosette of tissue appears to be that one is able to retain the natural opening of the ureter. After dissecting with scissors through the entire thickness of bladder wall blunt dissection was resorted to, and I found it surprisingly easy to free the lower ends of the ureters along the pelvic wall without injury to the peritoneum, which in this case never seemed to be in any danger. Both ureters having been freed for a distance of about two inches, the whole of the bladder tissue was dissected off from the perimeter where it merged into the skin to the prostate.

Once more turning my attention to the rectum I introduced an index finger, and pushing the lateral wall of the rectum toward the bladder wound I used this as a guide and completed with the free hand the deep dissection anteriorly, which proved a matter of no great difficulty.

The final step in the operation was reached—the implantation of the ureters into the rectum. Using the index finger in the bowel as a guide, the exact point at which the implantation was to be made was determined. Peters lays down three rules for guidance in this matter: 1. It must be above the internal sphincter. 2. It must be in the lateral and not in the anterior wall of the rectum to avoid kinking. 3. It must be sufficiently high to permit the ureter to project slightly, say from one-quarter to one-half an inch into the lumen of the bowel without stretching.

This point having been determined I passed a curved forcep into the rectum using the finger as a guide up to the point, and on the forceps and finger I lifted the bowel into the anterior wound, and making counter pressure from without pushed the forceps through the bowel wall. Upon opening the forceps the end of the catheter was caught and drawn carefully through the rectal wall and out the anus. The forceps being reintroduced through the same opening were made to grasp the rosette of tissue with the ureter, and this was in turn drawn into the rectum. This pro-

cedure was then repeated on the other side. The sponge plug was now withdrawn.

There seems to be no necessity to stitch the ureters in position since adhesions soon form.

In describing the operation I made mention of the possible advantage of using a probe for a guide in place of catheters on account of greater facility of introduction. This was further emphasized in my case, when on the third day I found the left catheter was not draining properly, and upon removing it it proved to be completely plugged with urinary salts.

The right one was similarly affected two days later and removed; it might be urged that the catheter is of value in observing that the draining is free from each catheter, and this of sufficient force to cause their adoption.

No attempt was made to close the abdominal wound in my case. It was firmly packed with sterile gauze and allowed to granulate. The gauze affords an excellent splint to the ureters in their new position. In fact one would be surprised at the comparatively small area left to granulate.

During the first twenty-four hours following the operation there was a very considerable free oozing from the abdominal wound which required the application of more dressings.

On the twenty-fourth of January, the day of removing the left catheter, the temperature rose to 103 and continued to rise to 104 3-5. It was irregular during the following two or three days, indicating sloughing in one of the rosettes. The discharge from the rectum being now offensive, we irrigated the rectum with boracic solution. When the temperature became normal there was a slight leak of urine through the abdominal wound mixed with pus. This continued until the pus ceased, when I had the lad anesthetized and placed on the operating table. Upon filling the rectum with milk a small amount flowed over the abdominal wound, showing that there was an opening in the bowel wall. Upon emptying the rectum and carefully examining with the finger the silk ligature which was used to stitch the catheter to the ureter was found lying loose between the rosette and the rectal wall. This was removed and the patient put back to bed, since then the leak entirely ceased. The hernia will be dealt with by another operation after the abdominal wound is entirely healed.

When one considers the terrible condition in which the patients live with constant dribbling of urine down the limbs, with their clothes saturated and their offensive odor, when it is remembered that they are practically ostracized from society, and the danger

which confronts them of septic infection of the kidneys, the real advantage of this operation becomes apparent.

In the case of this boy who can now retain his urine for a period of from three to five hours in the daytime and usually an entire night, one can easily imagine the great comfort that has accrued to him and his family by virtue of this operation. And when we pause to reflect on the safety of this procedure, as compared with older intraperitoneal methods of other operators, we cannot fail to express our appreciation of Dr. Peters, whose knowledge of anatomy and whose surgical genius was such as to enable him to devise and successfully carry out this extraperitoneal transplantation of the ureters.

THE CHOLERA SITUATION IN CANADA

No case of cholera has arrived at quarantine nor been reported in the United States since those noted in the last issue of the Public Health Reports.

On July 28 a request was addressed to Dr. Montizambert, director of public health in Canada, to apply bacteriological examination to Italian steerage passengers coming to the United States by way of Canada to determine whether such passengers were bacillus carriers. In response Dr. Montizambert stated July 29 that a ministerial order had been issued providing for bacteriological examination of all Italian steerage passengers before admission to Canada for the purpose of excluding bacillus carriers, and that a bacteriologist had been appointed at Grosse Isle quarantine station, Quebec, and that others would be appointed at Halifax and St. Johns. He also forwarded the following circular:

Circular to Quarantine Officers, the Commissioner of Customs, Ship Owners, Agents, and Others Concerned.

Office of the Director General of Public Health,
Ottawa, Canada, July 27, 1911.

Sir or Sirs,—I am directed by the honorable the Minister of Agriculture, to inform you that, in order to diminish the danger of the introduction of Asiatic cholera into this country, he has issued the following orders:

All steerage passengers arriving at ports in Canada from ports or places infected with cholera, shall be subject to bacteriological examination at the quarantine station of the port, and shall not be permitted to pass such station or to make customs entry, until it has been determined by such examination that they are not cholera-bacillus carriers. This regulation shall apply until further notice to steerage passengers from Italy coming directly or via intermediate ports.

For all cholera contacts arriving on vessels upon which cholera has occurred, the period of detention under quarantine observation shall be 10 days, unless after 5 days' detention they are found not to be cholera-bacillus carriers.

Your obedient servant,

F. MONTIZAMBERT,
Director General of Public Health.

THERAPEUTIC NOTES

ARTHRITIS DEFORMANS.

Dr. P. W. Nathan, New York (*J. A. M. A.*), divides his plan of treatment into two stages. In the first stage the patient is kept at rest, receiving nutritious diet, with doses of thymus extract. This is kept up until the disease is quiescent and makes no further progress. He uses 5-grain tablets of thymus extract, giving from two to four three times daily, either before or after meals. This must be given sometimes for months. On the disease being arrested a gradual return to active use of the affected limbs is begun. For intractable deformities tenotomy or osteotomy, if needed.

GONORRHEA.

Magian's treatment (*B. M. J.*) consists in large—three gallon—irrigations with 1:5,000 pot. permang., followed by similar washing with distilled water; then three gallons of water containing an ounce of protargol, 30 grains of chloride of gold in one quart of water and repeated irrigations with one-half per cent. protargol in the course of the next twenty-four hours. Repeat the irrigations on the second, third and fourth days with increasing strength. On the fifth day use three gallons of weak sulphate of zinc solution, and on the sixth day a similar amount of weak nitrate of silver. The cure is said to be almost constantly complete.

NICKEL SULPHATE IN MEDICINE.

Kolipinski (*Mon. Cyclop. Med. Bull.*) states the dose is ½ to one grain after meals or food in pill, tablet or solution. It has been found potent as a germ destroyer, and has an antibactericidal power. He has used it with success in several commoner parasitic skin diseases, in a strength of one to two per cent. In acne vulgaris it is a good remedy applied locally several times a day; and it may be given internally in this disease where the patient is thin and pale. He is very enthusiastic in its use in chorea, motor disturbance with spasm and inco-ordination, chronic neuralgia of the face, tic douloureux, migraine, chronic enteritis, epilepsy, neurasthenia, etc.

GASTRIC ULCER.

Latz (*Wis. Med. Jour.*) believes that the continued use of olive oil before meals is an effective method of breaking into the vicious cycle causing hyperacidity and subsequently gastric ulcer. He reports two cases with exceptionally gratifying results.

Reviews

Principles and Practice of Dermatology. By William Allen Pusey, M.D., Professor of Dermatology, University of Illinois. Second revised edition, 1079 pages, 384 illustrations, 1 colored plate. 1911. $6.00. New York: D. Appleton & Co. Toronto: D. T. McAinsh & Co.

On examining this book one is struck by the fact that the author has given considerable space to the principles of dermatology, namely, 167 pages. This is all very well for students in this department of medical practice, but, we are afraid, will be looked upon by the practitioner as a bit superfluous, considering that what most practitioners require is a keen, clear, concise, modern, up-to-date exposition of the subject, especially as regards diagnosis and treatment. Of course it is necessary for all this in a text-book.

But the book is a comprehensive study of the whole subject of dermatology, equalling in its make-up and exposition any now before the profession of similar character.

It is beautifully and exceedingly largely illustrated. We heartily commend it to our readers.

A Text-Book of Medical Diagnosis. By James M. Anders, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and L. Napoleon Boston, M.D., Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1,195 pages, with 443 illustrations, 17 in colors. Philadelphia and London: W. B. Saunders Company. 1911. Sole Canadian agents, The J. F. Hartz Co., Ltd., Toronto. Cloth, $6.00 net; half morocco, $7.50 net.

On the subject of medical diagnosis nearly every year two or more volumes are published by new writers, and this is necessary to keep pace with modern discoveries.

Dr. Anders is already known as a writer, and his excellent work is well shown in this new book. He is to be congratulated on his method of presentation of his subject and on its modern nature. Although a book of 1,195 pages, it has yet one serious fault, and that is it is too brief. If in his next edition he will explain the causes of many of the simpler physical phenomena, as his contem-

porary, Sahli, has attempted to do, he will have the most satisfactory book on the market for students to use.

His division on Nervous Diseases is not satisfactory, as, while it is descriptive of the various symptoms and pathological disturbances, yet it does not give a very good arrangement for the examination of the patient, and the psychical examination is not referred to.

However, the book is good, and, in fact, with these defects removed, is probably the best of its sort on the market; the plates are original in many respects, and the style is direct and there is no waste material. It is unnecessary to review in detail its contents, as nearly all the new tests are described and the older methods are also corrected and modernized.

Structure and Functions of the Body. A hand-book of anatomy and physiology for nurses and others desiring a practical knowledge of the subject. By Annette Fiske, A.M., Graduate of the Walthan Training School for Nurses. 12 mo. of 221 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1911. Sole Canadian agents, The J. F. Hartz Co., Ltd., Toronto. Cloth, $1.25 net.

This volume appears very suitable for those for whom it is intended, nurses and probably primary students of other professions than medicine. It is compact and easily understood.

"*What to Eat and Why.*" By G. Carroll Smith, M.D., Boston, Mass. W. B. Saunders Co. Hartz Co., Toronto.

This new book on *diet* has an advantage over any similar work, in being essentially *readable*. It has not the completeness found in most of its contemporary manuals, but is entirely devoted to applied dietetics. However, it is the first book of its kind that the reviewer has enjoyed reading, and it appears to be the result of Dr. Smith's careful study of the dietetic side in his own practice.

The articles on Constipation, Typhoid Fever, Obesity and Gastric Ulcer, with the arrangement of actual meals for breakfast, luncheon and dinner, are more than usually satisfactory to the reader and make the book valuable.

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COMMENT FROM MONTH TO MONTH.

The Ontario Medical Council has met for 1911. It was the first meeting of the new Council, and, apparently, better than its predecessors gripped the situation.

The medical press and the profession at large have long and patiently called for reforms.

We may now look forward to the abolition of "defunct institution" representation, and quite likely a reduction of homeopathic and territorial representation.

Students will hail the day when the primary and intermediate examinations have been abolished.

Although two teachers on the staff of the University of Toronto Medical Department were denied admission and participation in the deliberations of the Council, on account of their dual capacity —one representing Trinity and the other Victoria—why make fish of one and fowl of another? Surely the representatives of other non-medical-teaching institutions should have had similar treatment meted out to them.

Heart Diagnosis by Electricity is something new in the domain of clinical diagnosis. "Heart stations" are now established in Johns Hopkins Hospital and in both the Presbyterian and Mt. Sinai Hospitals, New York.

The development of this method is due to Wallen, an Englishman, and to Einihoven, the Dutch physiologist. In his laboratory in 1903 the latter devised the essential feature of the new apparatus—the "string galvanometer."

By the observation of certain electrical currents, intimately related to and accompanying the different phases of the heart's action, the diagnostician is enabled to supplement greatly the sensibilities of touch, sight and hearing, employed in detecting abnormalities in the heart's action.

As the apparatus involved in the "heart stations" is extensive and intricate, its employment will be altogether confined to hospitals.

It can be employed for observation and record of excitation, pulsation, heart sounds, pulse waves, blood pressure, etc.

The Royal Commission on Tuberculosis has issued its final report. It establishes the fact that bovine tuberculosis is communicable to human beings and is especially dangerous in the case of little children.

It will be remembered that at the International Congress on Tuberculosis in London in 1901 Professor Koch made an announcement, considered authoritative by some, that human beings could not be infected from animals because he had not been able to infect animals by inoculation with the human bacillus.

The result of this pronouncement was to throw the profession into two camps, and many were the wordy warfares waged thereon. This state of uncertainty led to the appointment of the Royal Commission, which now, after a labor of ten years, has completed its observations and accordingly recorded them.

This Commission was required to find answers to the following:

1. Whether the disease in animals and man is one and the same.

2. Whether animals and man can be reciprocally infected with it.

3. Under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favorable or unfavorable to such transmission.

Observation implies two things: Attention to phenomena which

must be in the highest degree concentrated; record of the phenomena, which must be done photographically accurate. This the Commission proceeded to do for themselves by actual experiments, observations and records.

Within three years the first interim report was issued, namely, in 1904. It definitely established that human bacilli would produce in cattle a disease indistinguishable from bovine tuberculosis. The second showed that fatal cases of tuberculosis in human beings had been caused by the typical bovine bacillus, but all of them occurring in children, all cases of abdominal tuberculosis. Now the final report establishes that consumption in man can sometimes be traced to the bovine bacillus.

As it is generally conveyed in cow's milk, the Commission recommends administrative measures to prevent transmission, both through milk and food. So, whether affected in the udder or internally, and, therefore, invisibly, milk for consumption by young children should be absolutely prevented from reaching them.

The one point gained after the scientific labor of a decade is that we are now no longer in any doubt as to the certainty of milk spreading tuberculosis.

News Items

Dr. R. A. Reeve, Toronto, has received an honorary degree from the University of Birmingham.

Dr. Wilfred T. Grenfell, the Labrador missionary, sailed for Labrador from New York on the 1st of August.

Montreal will consider stringent regulations looking towards the adoption of compulsory vaccination.

Dr. Henry Scanlan, Montreal, died in that city recently. He was prominently identified with athletics.

Dr. Bruce L. Riordan, Toronto, is recuperating after a very prolonged illness in New London, Conn.

Just prior to the annual meeting of the Ontario Medical Council, Dr. Gibson, the President, entertained the members at dinner at The Queen's, Toronto.

Dr. L. J. Bellivan, a prominent citizen of Shediac, N.B., died on the 27th of July. He practised with marked success for 27 years in Shediac, and was that town's first mayor.

The smallpox epidemic in outlying districts of Quebec which was causing considerable anxiety to the provincial board of health of that province is now said to be under control.

Dr. T. G. Roddick, we are pleased to announce, is making favorable progress after a severe illness. He is expected to leave the Royal Victoria Hospital in a few days.

Dr. D. L. McAlpine of Vancouver died the 30th of April, aged 77 years. He had practised in British Columbia since 1884, going there from London, Ontario. He was C.P.R. surgeon for a number of years.

The death is announced of Dr. Howard M. Church, Montreal, aged thirty-nine years. For ten years the late Dr. Church was demonstrator of anatomy at McGill and was surgeon-general in the Garrison Artillery.

For the month of July the total deaths in Montreal numbered 1,175, and of this number 837 deaths were those of children under five years of age. This was the worst monthly record in the history of Montreal.

The increasing use of cocaine in Montreal is shown in the annual report for 1910 of the Superintendent of Police. Since July last the police have made over 150 arrests on charges of using or selling the drug.

Dr. Allen G. Brown, formerly resident physician at the Sick Children's Hospital, Toronto, has been appointed resident physician at the Children's Hospital, New York, in the service of Dr. L. Emmet Holt.

A fine rural practice and property is for sale in the County of Wentworth. This practice is worth $3,000 annually, is long established, and further particulars as to location and terms may be had on applying to this office.

This year's annual meeting of the Ontario Medical Council made a definite move towards reforming itself. It is expected that at the end of the present Council in 1915 a reduction of approximately one-half of the representation will be effected.

Dr. George Glionna, the first Italian to graduate in medicine in the province of Ontario, and who has commenced practice in Toronto, was recently tendered a banquet by his compatriots of this city. Dr. Harley Smith, the Italian Consul, acted as toastmaster.

To the advertisement of Macmillan and Company, 70 Bond St., Toronto, we direct the attention of our readers. No medical library can be complete without Allbutt and Rolleston's System of Medicine; and every practitioner doing surgery will heartily appreciate Kocher's Operative Surgery, an extensive review of which recently appeared in these pages.

The following Committee have the matter of reorganization of the Ontario Medical Council in hand: Dr. Edward Ryan, Kingston; Dr. J. MacCallum, Toronto; Dr. MacColl, Belleville; Dr. E. E. King, Toronto; Dr. T. W. Vardon, Galt; Dr. James MacArthur, London; and Dr. E. A. P. Hardy, Toronto; the latter representing the Homeopathic body.

The attention of our readers is directed to the advertisement of Brand & Co., London, England. Brand & Co. put forth some excellent products in the way of condiments, potted and canned meats, soups and essences of beef and chicken which have a world-wide reputation. Physicians will find their essences of the highest advantage for the sick-room.

Hamilton Hospital for the Insane was partially destroyed by fire on August 1st. Eight inmates perished in the burning building in spite of heroic efforts of the staff and attendants to save them. The number of inmates admitted to this institution in 1910 was 215, the largest number admitted in any previous twelve months. The hospital had a capacity of 1,220, 596 male and 624 female, and there were in residence on Oct. 1st last 1,223 patients. The daily average for the hospital for the previous year was 1,179.

The Ontario Medical Council passed the following resolution re the inspection of schools at its recent annual meeting:

Whereas, The question of medical inspection of schools and scholars is now prominently before the peoples of various nations, and

Whereas, The Legislature of 1907 of Ontario authorized trustees to provide and pay for the dental and medical inspection of pupils as the regulations may prescribe, or, in the absence of regulations, as the board may deem proper:

Resolved, That this Council, in the interests of school children, respectfully recommend to the Minister of Education the advisability of taking a physical census of the school children, with the view of comparing the health and physical condition of children in urban and rural districts; and in the meantime further recommend the training, as in England, of the students in our model schools, normal schools and faculties of education in such a knowledge of school hygiene as will enable them to recognize common defects and diseases of children.

This Council further recognizes that while the employment of school doctors and nurses, giving all their time to medical inspec-

tion, would be the ideal plan for every municipality in the province, yet it is of the opinion that the public are not sufficiently familiar with the benefits of medical inspection to be ready to meet the very considerable expense involved in inaugurating such a comprehensive system at the present time.

THE following resolution was passed by the Metal Trades Council at its regular meeting of July 25th, 1911. Publication and editorial comment is requested. Resolution on dental clinics and medical inspection:

Whereas, Investigation of our schools has shown that the children's teeth are in a deplorable condition of neglect and decay, and

Whereas, The preservation of the teeth is essential to good health and good health essential to the enjoyment of life, and

Whereas, Owing to the poverty or neglect of parents large numbers of children suffer from an insufficiency of medical care, and

Whereas, Money spent upon the conservation of public health is well invested, the prevention of disease being much cheaper than its cure, and the maintenance of a higher standard of industrial efficiency more economical than permitting physical deterioration, to say little about the human side of this matter; therefore be it

Resolved, That the Metal Trades Council of Toronto place itself on record as favoring free medical treatment as well as free medical inspection of school children, and that, as a step in this direction, it call upon the Board of Education to establish free dental clinics in connection with the public schools, the children's teeth to be periodically examined and repaired, absolutely free of charge; this service to be rendered to all alike, without any taint of charity; and be it further

Resolved, That we approve the expenditure of any sum of money necessary for this purpose.

Copies of this resolution to be sent to the Board of Control, the Board of Education, the Medical Health Officer, the daily papers, various medical journals, the Socialist press, and numerous organizations, including the labor unions, with the request that they take the matter under consideration and communicate with us what action they take with regard thereto.

Publishers' Department

Messrs. Authors & Cox, the well-known artificial limb and truss manufacturers, at 135 Church St., Toronto, wish to call the attention of the medical profession to the Colostomy Truss recently introduced by Dr. Herbert Bruce, F.R.C.S., Surgeon to Toronto General Hospital, of this city. This Truss is made of pure gum. The following is Dr. Bruce's opinion of this apparatus, and speaks for itself:

"Finding it impossible to get a suitable pad to be used by patients after colostomy, I asked Messrs. Authors & Co., of Church St., to make one for me. They have gone to a great deal of trouble in faithfully carrying out my suggestions in the matter, and have produced a pad or truss for a colostomy opening which I believe will prove in every way most satisfactory. One of the distressing features of the condition is the periodic escape of gas, depriving these patients of participation in social life. This truss or pad fits around the colostomy opening so accurately that it overcomes this difficulty, and if properly applied there is no reason why the patient should not attend a dinner party in comfort and without fear of being objectionable to others. It is quite the best colostomy pad I have seen."

The After Treatment of Catarrhal Colds, Etc.—The various colds, "grippes," and catarrhs that afflict the respiratory mucous membranes during the winter months, are extremely likely to leave their traces upon the general systemic vitality, in the form of a greater or lesser degree of anemia. This is especially true of those whose resistance is "below par," *i.e.*, elderly people, young, ill-nourished children, and weaklings from whatever cause. The constitutional after-treatment of respiratory disorders, among this class of patients, is usually more honored in the breach than in the observance. There can be no better routine practice than to order Pepto-Mangan (Gude) as a general tonic and reconstituent, especially when anemia is apparent. This exceedingly pleasant and ferruginous reconstructive is so distinctly palatable as to render it generally acceptable to all patients, and is so entirely free from irritant properties as to insure its ready toleration without causing constipation or disturbance of digestion.

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Original Articles

*HEADACHES AND HETEROPHORIA.

By G. Sterling Ryerson, M.D.C.M., L.R.C.S.E.,
Professor of Ophthalmology in the University of Toronto.

No one symptom in the whole range of clinical medicine causes more annoyance to the patient and is a greater source of worry to the practitioner than persistent headache. Almost every organ of the body, in turn, is accused of being the offender, but the liver and the uterus have to take the greater part of the blame, and are maltreated and punished accordingly, very often with little benefit to the patient. After months of treatment of these unfortunate organs, he or she is sent to the ophthalmologist, if in the meantime the patient has not taken the matter into his or her own hands and consulted an optometrist, who successfully sells several pairs of glasses. As is well known, astigmatism and other refractive errors are frequent causes of headaches, but muscular imbalance plays a prominent part in causation. It may be said axiomatically that refractive headache is mostly frontal: uterine headache, bregmatic; and heterophoric headache, occipital.

In heterophoria the headache is accompanied by other symptoms of a reflex or neurotic character, presenting a symptom-complex which may simulate grave organic disease: such as pain between the shoulder blades, nausea, vomiting and dizziness, confusion of vision, confusion of mind, and fear of accident in crowded thoroughfares. Use of the eyes on railroad trains, street cars, or in shopping, render these symptoms acute. Restlessness is commonly marked, especially in children. Stevens and others have held that migraine, chorea and epilepsy result from heterophoria, and there is good

*Read at meetng of Ontario Medical Association.

reason to believe that these opinions are, in some cases, well founded.

The following cases well illustrate the conditions produced by heterophoria: A boy aged eleven years was brought to me by his father, in February last, complaining of almost constant headache, and of confusion of vision and mind. He said that he lost the line when reading in his book and on the blackboard so that he was always making mistakes, and was considered a very dull boy, and was quite discouraged in consequence. He was very restless in school, and was constantly reprimanded for not sitting still. The pain he complained of was at the back of his head. He had an occasional twitching of the alae nasi, and his parents noticed that when he chewed his head was jerked upwards, backwards and to the right. Examination showed hyperopia and right hyperphoria, 4°. After wearing his correction for a time without relief of the symptoms, partial tenotomy of the right superior rectus was done. A month later jerking of the head had greatly diminished, and at present has almost disappeared. His headache is relieved and he is able to follow the lines in his book without difficulty.

Case II.—This case illustrates the benefit to be derived from partial tenotomy of the external recti in exophoria, both for near and distance. Mr. S., manager, aged 36, had constant headache referred to the occiput, confusion in reading and difficulty in fixing his eyes. He always came home from the theatre with a headache. Examination showed a small amount of hyperopic astigmatism, which was corrected under homatropin, but without much benefit. A partial tenotomy of both external recti was made with most gratifying results.

Case III.—The following is an illustration of the relief of epilepsy by the treatment of the hyperphoria. W. M., aged 30, came to consult me March 10th, 1905. He gave a history of suffering from severe headaches from which he got some relief by bending his head as far backwards as possible. For a year or more he had had slight epileptic attacks with loss of consciousness. They were not severe and were unattended by protrusion or biting of the tongue. They probably lasted but a minute or so, and in half an hour he had recovered except for a feeling of listlessness and drowsiness. Examination showed a myopia of 4 D., with hyperphoria right of 6 degrees. After correction I partially divided the right superior rectus. A test showed that there was still 2 degrees of hyperphoria. In spite of this he steadily improved and the attacks ceased. I kept track of him for two years, during which time he continued well, but have not heard from him since.

What is the proper course to pursue, operation or prisms? Obviously the first consideration should be the correction of the refraction. I believe many cases of slight heterophoria correct themselves when the irritation of incorrect or of no glasses is removed. In other cases where there is little or no refractive trouble hyperphoria, even as little as 2 degrees, will give rise to annoyance, and must be corrected by prisms. This is especially true of hyperphoria. It may be necessary to do tenotomy in some of these cases. I think that where after wearing a prism, singly or combined with a spherical glass, and exercise with a prism of five degrees or thereabouts, for some time without relief of the symptoms, a partial tenotomy is indicated. I would recommend a partial tenotomy in all cases of hyperphoria or exophoria of three degrees or upwards, but I would be chary about operating on the internal rectus. I would prefer a small advancement of the opposing muscle. It is serious matter to weaken any one's accommodation, and the case should be studied with great care. Finally, let me deprecate promiscuous operating for heterophoria. Choose your cases carefully, and do not divide the tendons unless you are convinced that nothing else will do the work as well.

TORSION OF THE PEDICLE OF AN OVARIAN CYST.*

By E. R. Secord, M.D., Brantford.

It is my desire to present the following notes of a case of torsion of the pedicle of an ovarian cyst, because they illustrate in an exceptionally clear manner the sequence of events when such an occurrence happens.

Mrs. K., aged 37, the mother of four children, was confined on Nov. 4th, 1910. She was attended by my friend, Dr. Addison, of St. George, and he has kindly contributed the following description of the early events in the case.

Her labor was quite normal. She was visited on Nov. 6th and 11th, and on these occasions pulse, temperature and lochia were all that could be desired. She was permitted to get up on the 14th. Dr. Addison was called to see her at 11 o'clock p.m. on this date, and on arrival was told that she had been out of bed in the afternoon, and towards evening she picked up one of the children who

*Read at meeting of Ontario Medical Association.

required some assistance. She immediately felt sharp pain in the right lower quadrant of of the abdomen, and had to be helped to bed. At the time of the doctor's visit her pulse was 120, and temperature 101 F. Her abdomen was slightly distended, and very tender, especially in the right iliac region. The uterus was quite movable, but drawn to the right, while in the right fornix, above and behind, could be felt an indistinct tender mass. Believing the case to be one of salpingitis, with commencing peritonitis, small doses of morphia were given, and hot boracic vaginal douches ordered.

There was no improvement on the 15th, and I saw her for the first time on the 16th, when the picture was that of a moderately sharp attack of pelvic peritonitis—abdomen distended, very tender, but not markedly rigid. An indistinct tender mass occupied the right fornix. There had been no movement of the bowels since the onset of the attack—calomel and rectal enemata both proving ineffectual. Ice bags were applied to the abdomen and the hot douches continued. During the next three days the distension increased, absolute constipation continued, the temperature dropped to normal, the pulse became more rapid, the patient more restless, and continuous hiccough with occasional vomiting supervened. In short, the picture of abdominal inflammation had given place to one of acute obstruction. An interesting feature at this time was the entire absence of visible paristaltic movements—a symptom I place great reliance on in the diagnosis of mechanical obstruction of the bowels, nor could any be elicited by flicking the abdominal wall. A very occasional gurgling could be detected by the ear placed over the abdomen. The pelvic mass was larger but extremely hard to map out, owing to the distension. An aspirating needle was introduced into this without result.

Feeling that the patient was dying from obstruction of the bowels of the paralytic type, possibly due to a peritonitis, I advised laparotomy. This was hurriedly done without removing the patient from her bed. Through a short incision in the right rectus below the umbilicus, a coil of distended small intestine was withdrawn, incised, and a tube introduced. There was no free abdominal fluid, though the peritoneum was intensely injected. Owing to the extremely bad condition of the patient I made no further exploration. For twenty-four hours her condition was critical, but gas and fluid feces were finally passed from the artificial anus, assistance being given by turpentine stupes, and gentle abdominal massage.

The distension gradually subsided, some bowel contents being

now passed per rectum, and what appeared to be a localized ascitic collection on the left side of the abdomen became revealed. The abdominal wall over this collection was quite flaccid, and within certain limits the fluid moved with movements of the patient, though definitely localized on the left side, reaching from pelvis to ribs. Gradually this collection became more distinct, and I was considering the advisability of section to determine its nature, when on Dec. 9th she was seized with a severe chill, and the temperature rose to 104 deg. F. This soon dropped to normal, but went to about the same level on the following day. The pulse rate was increased to about 130, and the facial expression was bad, breath foul, and in short every evidence of a severe toxemia.

On Dec. 11th I opened the abdomen by a median incision, great care being taken to avoid soiling of the wound by the discharge from the artificial anus. On incising the parietal peritoneum, a dark red ecchymotic membrane was found everywhere adherent. I punctured this with a trocar and drew off a large quantity of hemorrhagic fluid, then introduced a finger into the cavity and proved it to be an intra-abdominal cyst. I then carefully separated the adhesions upward and laterally, separating adherent omentum, large intestine, and numerous coils of small intestine, and was finally able to deliver part of the cyst wall through the incision. I was then able to work down behind the cyst into the pelvis, and finally to follow the cyst wall to its pedicle, which sprang from the right ovary, was about the size of an ordinary lead pencil, and contained the most clearly defined example of axial rotation, from the patient's right to left. The wall of the cyst was ecchymotic, and in many places very soft, being punctured and torn in numerous spots while separating the adhesions. In other words the cyst wall was undergoing necrosis. Feeling that herein was the complete explanation of the symptoms, I ligated the pedicle, removed the cyst, mopped out the abdominal cavity, closed the incision without drainage, and had the satisfaction of seeing the patient make a complete and uneventful recovery.

After some weeks the skin around the artificial anus was becoming pretty raw and excoriated, and as considerable fecal matter was being passed per rectum, I decided on closing the artificial opening, which was accordingly done on Jan. 4th. The adherent bowel being carefully separated, the loop of ilium was drawn outside the abdomen, the opening closed with a two layer suture, the loop returned, and the abdominal wall closed in layers. Again an uneventful recovery ensued.

Torsion of the pedicle of an ovarian cyst is not a very rare con-

dition. Rokitansky is quoted as saying that it develops in 12% of all cases, but from the expressed opinions of Canadian and American authors I would be inclined to think this above the average.

It has occurred during pregnancy, and this is set down by some writers as a factor in determining this accident, but so far as I have been able to review the literature, its occurrence during the puerperium is rare.

HOSPITALS FOR INEBRIATES.

By A. M. Rosebrugh, M.D., Toronto.

In Great Britain there are three classes of institutions for the treatment of inebriates, as follows:

1. The "Retreats."
2. The "Certified" Reformatories, and
3. The "State" Reformatories.

1. The "Retreats" are private hospitals under government inspection. There are twenty-two of these institutions in England.

2. The "Certified" Reformatories are established by counties or union of counties, but the expense of maintenance is borne wholly by the Government. They receive cases committed to them by the courts, and they are under Government inspection.

3. The "State" Reformatories are Government institutions for the segregation of imbecile and unmanageable drunkards, transferred from the "Certified" Reformatories. On account of the encouragement given by the Government through the "Inebriates" Act of 1898, the number of Certified Reformatories has increased from three to eleven, and during that period over 3,000 patients have been received from the courts. The twenty-two "Retreats" receive on an average 500 cases a year.

Australia is profiting by the example of Great Britain in the public care of inebriates.

In New South Wales reformatory efforts were commenced by the Government in 1907. Institutions for this purpose have been established in connection with jails.

In Victoria an Institution for Inebriates was founded in 1907. At Lara a mansion has been purchased by the Government for the reformation of inebriates. The land attached covers one square mile.

In New South Wales a portion of Darlinghurst Jail has been set apart for the reception of habitual inebriates on indeterminate sentences.

Germany has no State Hospitals for Inebriates, but private hospitals are assisted by the German Imperial Insurance System. There are about fifty private institutions for inebriates in Germany. They receive aid from local poor commissioners as well as from insurance companies.

Denmark has five private Institutions for the Reformation of Inebriates, and which receive Government aid.

Hungary subsidizes a private Inebriate Hospital near Budapest.

Switzerland has eleven "Colonies" for the treatment of alcoholic cases. They receive aid from the Government monopoly in alcohol. Switzerland leads the world in the scientific study of alcoholism, and a large percentage of cures are reported.

United States.—Although there are at present but two State Hospitals in the United States for the treatment of inebriates, steps are being taken in a number of the States with a view to their establishment.

In Massachusetts a hospital at Foxborough for the medical treatment of inebriates has been in operation for a number of years, and at Knoxville, Iowa, a hospital has been in operation for two or three years.

Two years ago the Legislature of Minnesota adopted a bill providing for the establishment of a hospital or reformatory, and at the last session of the New York Legislature a bill was adopted authorizing the establishment of a farm colony by the city of New York.

Farm Colonies.—At Cleveland, Ohio, there is a farm colony located on a very extensive tract of land for the reformation of inebriates. There is also a farm colony at Bridgewater, Massachusetts, with ample grounds, which is used for the detention, on indeterminate sentences, of vagrants, as well as for the defective and apparently hopeless criminal drunkards.

A New Departure.

Massachusetts is making a new departure in its provision for the care and cure of its inebriates. A second farm colony is being established on a large tract of land such as will permit of three classes of inebriates, widely separated, receiving distinct and separate care and treatment, as follows: (1) A hospital and grounds for men. (2) A hospital and grounds for women. (3) A detention colony for observation and care of inoffensive but seemingly hopeless chronic inebriates.

The Situation in Ontario.

When the late Sir Oliver Mowat became Premier of Ontario he was strongly impressed with the great need of provision being made for the reformation of drunkards, and he proposed establishing an institution for their reformation at Hamilton. Much to his regret, however, he was obliged to abandon the project, as he found that public opinion did not seem to him to be sufficiently ripe to justify incurring the necessary expense; for which reason the proposed institution was changed to an Asylum for the Insane.

In 1891 the Prison Reform Commission appointed by the Ontario Government reported very strongly in favor of the establishment of at least one reformatory in Ontario for the reformation of drunkards. When, however, the attention of Sir Oliver was called to this recommendation, he stated that his Government would be pleased to co-operate in the establishment of one or more reformatories in the Province, but that the initiative could not be undertaken by the Government. However, as this offer was never put in such a form by the Government as could be made use of as an incentive to voluntary effort either on the part of the municipalities or private individuals, nothing came of the offer.

The Situation in Toronto—A Hospital Required.

The Ontario Society for the Reformation of Inebriates was organized in Toronto five years ago. The object of the Society is:

(1) To promote the reformation of indigent inebriates in Ontario: (a) By making use of the public hospitals of the Province for the purpose; and (b) by combining therewith the Massachusetts Probation System.

(2) The second object of the Society is to promote the reformation of inebriates in Toronto as follows: A medical officer and a probation officer attend the Police Court and offer medical treatment and a helping hand to inebriate prisoners found desirous of such help. The medical treatment is given by the medical officer either in the home, at the office of the physician, or in a ward of one of the public hospitals of the city. The probation officer acts the part of a friendly visitor, assists in finding employment when necessary, and helps to a better life. By means of these combined efforts no little good has been accomplished. The work is heavily handicapped, however, from the lack of proper hospital accommodation. The public hospitals are frequently overcrowded, and moreover lack facilities for the up-to-date scientific treatment of inebriates. A small hospital—a "Cottage Hospital"—is urgently required in Toronto for this purpose. It is true that the City

Council is committed to the scheme of establishing a farm colony within, say, 10 miles of the city for the detention and proper treatment of inebriates, but two or three years may elapse before this boon can be realized. Moreover, a reception hospital in the city will be required in connection with the proposed farm colony. Under the circumstances the Executive Committee of the Society consider the time ripe for grappling with the problem. It is proposed to ask the Ontario Government for one-third the amount required, the City Council one-third and the benevolent public one-third. In this project may we not count upon the sympathetic co-operation of the medical profession?

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*INFECTIOUS AND CONTAGIOUS DISEASES.

D. McPherson, M.D., New York.

The upper air and digestive tracts are coming more and more to be considered as the port of entrance to the general system for many of the infections and contagions. The following list of diseases—some of them generally, and some of them occasionally—have as ports of entry the mouth and nose:

1. Diphtheria, with or without streptococcus complications.
2. Streptococcus infections—so called pseudo-diphtheria.
3. Influenza.
4. Pneumonia—the pneumococcus being present in the mouths of nearly all persons, adhering to the mucous membranes, and expelled by coughing and by cilia.
5. Otitis media.
6. General sinusitis.
7. Cerebro-spinal meningitis—in which it is commonly conceded that the nasal mucous contains specific organisms.
8. Intestinal and pulmonary anthrax.
9. Glanders—where usually the disease is first manifest in the nose, in the form of ulcerations on the mucous membranes.
10. Bubonic plague.
11. Leprosy.
12. Spirilla infections.
13. Spirocheta pallida.
14. Chancroids.

*Read at meetng of Ontario Medical Association.

15. Tuberculosis.

16. Mostly all bacterial diseases, protozoa infections, fungi, etc.

17. Staphylococcus infections of the lungs and middle ear.

18. Pyorrhea.

19. Milk infections—although directly considered, they are somewhat outside of the realm of the laryngologist; indirectly, they are within it, through secondary manifestations and complications.

20. Scarlet fever.

21. Measles.

22. Follicular tonsillitis.

23. Alveolar abscess.

24. Cerebral meningitis—the infection here entering by way of the tonsils, etc., into the general system.

24a. Acute rheumatism with its tonsillar manifestations may be superinduced by diseased tonsils, as certainly relief from many attacks has been obtained by their removal when diseased.

25. Phlebitis, erysipelas, pericarditis, peritonitis, by tortuous extension.

26. Serpiginous ulcer of the cornea.

27. Enteritis.

28. Septicemia.

29. Headaches resulting from sinus infections.

30. Mental phenomena.

The many complications that may result from the above diseases and conditions will occur to most of us, and proportionately add to the importance of these organs, and point to a means of preventing or augmenting the percentage of the diseases with which we have to deal, either as general practitioners or as practitioners of any of the various specialties.

Of the above mentioned infections, if we except the tubercle bacilli and the germs of suppuration, bacterial evidence seems to indicate that no germs are carried by the air or can be carried by dust and retain their virulence. Coughing, sneezing, and talking cause showers of droplets that are laden with infection—at least for the distance to which they are carried. Smallpox is still by many believed to be air borne, but even here the fact that during epidemics the disease is less prevalent the farther the radius from the isolation depots. Careful investigation shows the propagation to be largely due to direct contact through intermediaries of various kinds.

In the Pasteur Hospital in Paris, each patient is cared for in a separate room opening into a common hall. The doors are fre-

quently opened and left open. In the first thirty months of this hospital's existence, beginning in 1900, 2,000 patients were received, of whom 524 had smallpox, 163 erysipelas, 92 scarlet fever, 166 non-diphtheretic sore throats. The same nurses cared for patients with the different diseases, taking surgical precautions before going from one patient to another. The only evidence of transfer of infection among the 2,000 was the development of four cases of smallpox and two of erysipelas.

At the children's hospital in Paris, partitions separate the beds in the same wards. Asepsis is practiced, and all kinds of contagious diseases are treated, including typhoid and pneumonia. Out of 5,017 cases treated, only seven cross infections developed—six of measles and one of diphtheria. This would seem to indicate that there is not much evidence that the bacteria of these diseases are air borne to any considerable extent for any great distance. There is evidence that tubercular and pus germs are air borne; not much evidence that smallpox, measles, whooping cough, typhoid, etc., are transmitted in this way.

But whether disease germs entering the general system are conveyed by air or by direct contact, it is worth the time of the rhinologist to have his attention directed to the fact that they are within the scope of his work, in order that he may protect his patients by devising means of prevention for diseases entering the body through the nose and mouth. The means of lessening the chances of infection are in the hands of all of us, and as the subject receives more thought better and more numerous means will be devised.

Syphilis, tuberculosis, influenza—in our own time—and other diseases, show a partial or complete immunity—at least greater resistance develops in races and individuals—from the virulence of these diseases, as a result of being infected from time to time and from generation to generation, so that it may be more advantageous to the race that the individual be not entirely protected from gentle or light infections. The virulent infections, however, can transmit nothing to the race where the infected are killed, nor can the gentle one transmit anything favorable to an individual, of slight resistance, where the same ending results.

The external air passing through the nasal cavities undergoes changes of temperature, moisture, and freedom from suspended foreign substances before reaching the lungs. The spaces between the septum and external walls of the nose must not be too wide or too narrow—as we find by the discomfort produced by atrophic and hypertrophic cases, as well as in other conditions. Closure may be

manifested only in the recumbent position or in certain atmospheric conditions interfering with proper modifications of the air referred to above and predisposing to mouth breathing and changes in the mucous membranes and other tissues, thereby interfering with the natural resistance and predisposing to bronchitis, pneumonia, etc.

No work that I am conversant with has been done to mathematically prove that nasal abnormalities predispose their possessors to cerebro-spinal meningitis or other infections, but it is known in a general way that influenza and other infections are more severe and more likely to be followéd by complications—and proportionately more frequent in cases where sinus trouble or other abnormalities are present. Diphtheria and scarlet fever are known to be proportionately more severe where adenoids and tonsils are enlarged or diseased. Coryza attacks the individual with a deflected septum or an occluding ecchondrosis much more readily than where conditions are normal. Of course if coryza is superinduced by the above conditions, and if tonsillitis is superinduced by abnormal tonsils, we know that pneumonia, peritonsillar abscess, rheumatism, Bright's disease, peritonitis, etc., etc., are also invited by neglect of these and other conditions.

In a general way, rhinologists know the above to be facts. From the evidence of statistics, however, we have little proof. The best opportunity of getting evidence of the relative frequency—say of acute colds in those affected with nasal abnormalities—lies with the general practitioner, as he sees more of them, but he is not so awakened to the diagnosis of nasal conditions or to their effect as to endeavor to gather statistics of value. When I graduated I did not practically know, by inspection, an ecchondrosis from a deflected septum or from a swollen turbinate; and very few general practitioners know a nearly normal nose when seen, so that evidence from that source, generally speaking, would not be as reliable as we could wish. The rhinologist does not see as many cases of acute coryza—although he sees the sequelae—but when he does, he might gather figures, and in the aggregate he might get some statistics of value. It would seem to be undoubtedly true that many illnesses could be prevented were nasal and pharyngeal secretions kept from decomposing in the upper air and digestive tracts, whether the patient be well or sick. For instance, it may be that the nasopharyngeal catarrh of typhoid fever plays a part in inducing the pneumonia of typhoid. In any case, these patients are more comfortable after a mouth and throat cleansing.

The above reference to the general practitioner is not intended as an adverse criticism. It is impossible that any man can

thoroughly cover the entire field of medicine; even the specialist may find it difficult to keep abreast with the progress made in his own department. Indeed, the general practitioner, within human capacity fulfills the demands required of him more conscientiously than the modern specialist—whether he be a rhinologist, a neurologist, or what not—who launches into his chosen department with no more practical knowledge of general diseases than that demanded for the passing of undergraduate examinations. For the patient to obtain the best that modern medicine can give is, in many instances, an expensive performance, but the public are of course ignorant of the many modern devices of laboratory diagnosis and indirect laboratory treatment, and in many cases only need to be directed and informed by the practitioner before making use of them.

Incidentally, I may say that the neglect of the doctor to inform patients and the neglect of patients to make use of the means of obtaining the best that can be given by modern medicine is partly responsible for their resort to fads for relief of real ailments, and the antagonism shown by the ignorant for laboratory methods. Those of the public who cannot afford to pay for the fullest investigation of their ailments are liberally provided for by the enlightened wealthy and our profession.

We who are doing nose and throat work are continually seeing patients whose stomachs are incapable of performing the work that health demands. Frequently pus from the sinuses or nasopharyngeal catarrh is behind the stomach disturbance; again, the stomach disturbance is responsible for augmenting the unhealthy condition of the upper air tract, both resulting from recurring infections of the nose and throat due to neglect, and perhaps to easily removable causes. Yet there are general practitioners who object to the rhinologist's administering even rhubarb and soda to a referred patient. It is for the best interest of the patient that the rhinologist should, in many of these cases, handle the case as a whole. The subjective throat symptoms are the important ones to the patient. The indications of improvement are manifested in the throat. The patient, though a millionaire, can and will find something pleasanter to do than to spend hours in the waiting rooms of the different practitioners of medicine.

The rhinologist must go past the point where his place in medicine is the removing of ecchondroses of the nasal septum, cauterizing the turbinates, or making a minor diagnosis for some one, who, in the nature of things, is a less competent man to treat and note the results of treatment. The general practitioner should understand this in cases that he refers to the rhinologist.

A patient of mine who had been relieved of a long standing digestive trouble through moderately intelligent attention to her infected sinuses, laughingly told me that a medical friend had advised her to go to a fifth general practitioner as no nose man could treat stomachs. Generally speaking, when the rhinologist, with his general knowledge behind him, has corrected evident local causes producing general disturbances, the patient should then, in the nature of things, do better in the hands of a man to whose work any special ailment points, whether he be a general practitioner or some one else.

Pneumococci in the upper air passages are undoubtedly the cause of the spread of pneumonia, especially in wards where most patients' resistance is lowered. Influenza, coryza, tonsillitis, cerebro-spinal meningitis spread by contact, and patients so afflicted should be isolated. The infective power continues after the patient is entirely well. In diphtheria, this has been proven. Why should not the same hold true of other infectious diseases? Patients with virulent infections should be isolated, and patients with lowered resistance should not be in such close proximity to any infection as to render their contracting of it likely. Many people are immune or are too resistant to contract ordinary infections.

Infection carriers should be more carefully investigated; also there are cases where bacterial examination is the only way in which a diagnosis can be made. This should be resorted to in the milder forms of certain diseases, where the looked for clinical symptoms are absent. The sick need more careful supervision, to the end that all serious infections be isolated. This is true of even acute colds, where possible—and with certain intelligent families it is possible. It is not for the infected laity to decide whether they have had certain diseases; the danger is not only to the sick, but to those who come in contact with them. Physicians themselves should be more careful in making calls on the infected, owing to the danger of carrying the infection.

As it would seem to be advantageous to the individual in order that his resistance might be increased, that he be infected lightly, but from time to time, and as surgical asepsis is impracticable for every one every day and all the time, we must be satisfied with reasonable cleanliness, except in acute cases, where, as nearly as possible, asepsis and isolation should be maintained.

The general practitioner should educate his families to the importance of infection and the possibility of carrying it. It is difficult to educate the older people; perhaps the young can be impressed with its importance in school, but teachers in the schools

cannot teach hygiene if they do not know it themselves. A good way to appeal to the adult is through his pocketbook, by showing him how financial loss results from neglect of precaution. Then he will understand and become scientific.

In hospital wards where laboratory tests show infection without symptoms, screens can be used, if no better method is available. Physicians could have circulars printed, dealing with infectious diseases, and distribute them to their patients, as they will learn more by that method than by word of mouth. Circulars might present statistics, showing economic loss. When coughing, a handkerchief should be held before the mouth. Fresh air and good breathing are important.

Much can be done while waiting for perfection. Normal resistance takes care of ordinary infections. Virulent infections need to be isolated, and persons with lowered resistance should be kept away from any infections.

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Medicine

Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.

Etiology of Constipation. (Am. Proctologic Society.) By Horace Heath, M.D., of Denver, Col.

Dr. Heath mentioned two groups—miscellaneous and mechanical. Under miscellaneous, the author regarded heredity as unimportant, but attention was called to the faulty instruction of children in certain families. He stated that the constipation of infancy was due to undeveloped muscles; and of old age, to inactivity and atonicity.

Under mechanical causes he considered—diet, sedentary life, abnormal positions, angulations, coloptosis, and hypertrophy of the rectal valves.

The predisposing diseases mentioned were colitis, stricture, proctitis, fissure, hemorrhoids, fistula, polypi, enlarged prostate, and malignant growths.

Physiology of Constipation. (Am. Proctologic Society.) By Samuel T. Earle, M.D. of Baltimore, Md.

In reviewing the physiology of constipation in the symposium read before the American Proctologic Society, June, 1911, Earle calls attention to the sensibility of the alimentary canal in connection with its bearing on constipation. It has been shown that the stomach and intestines are quite insensitive to tactile and thermal stimuli, but that the esophagus and anal canal are sensitive. The whole of the alimentary canal is, however, sensitive to distension, which produces at first discomfort and subsequently pain. The rectum appears to be more sensitive than the rest of the intestines to distension, so that a large fecal mass produces more discomfort when lodged in the rectum than in any other situation. As a result of this, the normal accumulation of feces in the pelvic colon is unaccompanied by any discomfort, whereas, the entry of feces into the rectum at once produces a sensation, which acts as a warning that defecation is necessary. The discomfort produced by the presence of a large mass of feces in the rectum is partly due to the pressure

it exerts on the upper extremity of the sensitive anal canal. Prolonged retention of feces in the rectum leads to a blunting of its sensibility, so that comparatively little local discomfort is present in most cases of confirmed constipation. But in acute cases or cases of recent origin, in which the rectum is distended with feces much discomfort and occasionally severe pain is experienced. On the other hand, even a very large accumulation in the pelvic colon produces little or no discomfort in the intestine itself.

A large fecal accumulation in the rectum presses directly upon the anterior primary divisions of the third, fourth and fifth sacral nerve routes, as they emerge from the sacral foramina. It may therefore lead to neuralgic pain referred to the sacrococcygeal region. It is liable to cause suffering more from its constant presence than its severity; it is often as severe when the patient lies down as when he takes exercise, but some relief follows flexion of the lumbar spine. The muscles of the buttocks and back of the thigh, which receive a small part of their sensory and motor supply from the third sacral nerve route, may be the seat of similar pain. Neuralgic pain or parasthesia, in the form of tingling or a sensation of heat or cold may occur, in the course of the sciatic nerve, in the back of the thigh, and occasionally the sensation of cramp in the calf is produced. Pain is also occasionally felt in the hip-joint, it receives part of its nerve supply from the third sacral nerve. The roots which supply the muscles of the front of the thigh, are situated out of reach of the distended rectum, so that in the exceptional cases in which pain is produced by constipation in this situation, it must be due to pressure exerted by a fecal mass in the iliac colon on the anterior crural nerve; and is accordingly only observed on the left side.

That these neuralgic pains are probably due to the direct presence of a large and hard mass of feces, on the sacral nerve-routes is shown by their instantaneous disappearance on completely evacuating the rectum by enemata, a form of treatment which was already advocated for sciatica by Columnius of Naples at the end of the eighteenth century.

Possibly the erections and seminal emissions, and the frequency of micturition and nocturnal incontinence, which occasionally result from large fecal accumulations in the rectum, are due to direct irritation of the third and fourth sacral nerves, and are not reflex in nature. The spasm of the sphincter ani and levator ani muscles, which has already been described as an occasional complication of the fecal impaction in the rectum, which occurs in constipation, may perhaps be in part due to pressure on the fourth sacral nerve routes.

Neuralgia of the testicles in men and dysmenorrhea in women are sometimes increased by the direct pressure in the rectum on the nervous supply of the testicles and uterus respectively.—*Arthur F. Hertz, on Constipation.*

Bacteriology and Urinary Findings of Constipation. (American Proctologic Society.) By John L. Jelks, M.D., of Memphis, Tenn.

The author advances no new theories but expresses his views of the importance of both chemical and microscopical investigation in connection with clinical proctology, and the value of these examinations in cases of atonic constipation.

He refers to the importance of either finding, or eliminating, the presence of intestinal parasites, that are known to produce lesions in the intestinal coats and ports of entry of bacteria or their toxins. He expresses the belief that the destruction wrought to the sub-mucous structures, the infiltration of plastic material and the contracting, distorting, scarred portion of the bowel, as also the consequent destruction of, and interference with the secreting glands, their ducts and the nerve supply may become important factors in the atonic condition of some patients.

The author believes it is important to make microscopic examinations in all cases of this character—both of the crude and washed specimens, and of scrapings from the intestinal wall or from any lesion found in it. He also examines the urine chemically, and microscopically, believing this important, owing to the relationship and association of diabetes, kidney insufficiency and diseases of the kidney with cases of atonic constipation.

These examinations of the urine aid in determining the proper course of treatment, especially is this true when indicanuria, casts and sometimes traces of albumen, indicate the vicarious overwork of the tired and irritated kidneys, as also the intestinal fermentation and coprostatic auto-intoxication, which results in some cases.

The author refers to the importance also of examination of the stomach contents after test meals have been given, as these may furnish in some cases a clue to etiologic factors.

Blood examinations he finds quite important in determining the amount of opsonic resistance as also for finding infections in the blood, which matters by lowering the vitality may become factors in the atonic conditions which were being discussed.

Surgery

Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

The Surgical Treatment of Chronic Constipation. (American Proctologic Society.) By Louis J. Hirschman, M.D., of Detroit, Mich.

Constipation is divided into two great classes, the one class being due to a lack of functional activity, i.e., dietetic error, improper habit, neural or trophic influences. The other class, which some of us have been pleased to designate as obstipation includes all cases whose impaired activity is due to mechanical interference with the normal peristaltic movements and expulsive function of the bowel.

Obstipation or obstructive constipation may be caused by:

(1) The presence of any foreign body, occlusion, contracture, hypertrophy or accumulation in the intestinal canal.

(2) Displacements, acute angulations, distensions, neoplasms, adhesions or compressions of the bowel.

(3) Developmental defects and congenital deviations from normal.

Inasmuch as the surgical treatment of constipation, due to easily recognized local conditions, is obvious, they are dismissed with mere mention. Coloptotic constipation represents such a large percentage of cases of mechanical constipation that its discussion involves the most important field of surgery in the treatment of constipation. All patients with ptotic colons are not constipated, nor do all constipated patients suffer from coloptosis. There must be in addition to ptosis of the cecum, transverse or sigmoidal colons, a condition of functional inactivity due to atony of the bowel muscle.

Suspensions of ptotic colons by means of fixation by adhesions to the abdominal wall are unnatural and interfere with peristalsis. Restoration should be accomplished by shortening the natural support—the mesentery. Lateral anastamoses between the most dependent loops of ptotic bowel is sometimes indicated. Above all, massage, both abdominal and internal rectal, is of primary importance in restoring function, and should be used along with either dietary or hygienic measures to restore bowel function.

Some Observations Upon the Surgical Anatomy and Mechanism of the Colon. (American Proctologic Society.) By Granville S. Hanes, M.D., of Louisville, Ky.

Until comparatively recent years diseases of the colon and sigmoid, and the surgical anatomy of each, received but scant attention. Recently, however, much valuable information upon this subject has been developed. Robert Coleman Kemp in his work on Diseases of the Stomach and Intestines says that Dr. J. M. Mathews was the first to call attention to sigmoiditis and diverticulitis of the sigmoid.

The entire length of the large bowel in situ is found to be much shorter than when it is dissected from its attachments. An ordinary thirty-inch colon tube has sufficient length to extend around the lumen of the large bowel to the cecum. While this has not been done in the living individual it has been done in the cadaver, and radiographs of the same are on record.

It is almost universally believed that ordinary flexible colon tubes can be manipulated in such a way as to traverse the entire course of the large bowel around to the cecum. It has been proven by a number of investigators that such an achievement is impossible in the normal bowel. The average length of the sigmoid is about eighteen inches, and this being a floating portion of the large gut it is almost impossible for an instrument to pass beyond the middle half of the sigmoid. Should such be possible and the tube enter the descending colon it would be a physical impossibility for it to pass either the acute angle at the splenic flexure or the hepatic flexure. The failure of instruments to pass high into the bowel has been demonstrated by X-ray pictures.

Dr. Hanes demonstrated the difficulty in passing any instrument through the hepatic and splenic flexures by introducing a thirty-inch, No. 20, French, soft rubber catheter into the caput coli in an old appendicostomy case. He failed by any kind of manipulation to pass the catheter through these flexures. The tube was allowed to remain in the head of the colon for twenty-four hours with the hope that peristalsis would carry it around, but this failed. After manipulating the second time three hours later four inches of the catheter appeared through the anal opening.

He forced bismuth solution into the head of the colon till the wall of the gut was thoroughly distended, and then Dr E. Bruce made a skiograph. No regurgitation into the ileum occurred. This experiment was repeated a number of times with the results as above given. If the ileo-cecal valve allows no reflow into the ileum,

then exceedingly large amounts of water injected into the bowel are retained in the large gut, and not a part of the amount passed into the small bowel as is supposed by some.

In an old appendicostomy case, with the patient on the left side, coal oil was poured into a colon tube that had been introduced three inches into the rectum. In six and a half minutes the oil was flowing out of the appendicostomy opening. The amount employed was thirty ounces. This clearly demonstrates that liquids will easily pass around the entire colon without flowing through a tube. The point is also made that coal oil is much less irritating to the mucosa than plain water or ordinary aqueous solutions.

The capacity of the large bowel in situ was measured by temporarily closing the opening of an appendicostomy case and allowing coal oil to flow into the rectum as long as the patient could tolerate it. At a later date the same experiment was made by allowing oil to flow into the head of the colon. About the same amount of oil was received in each case. After making the same experiments in other cases it was decided that the average large bowel had a capacity, varying between fifty and sixty-four ounces.

The capacity of the rectum was ascertained by inverting the patient and placing a colpeurynter at the junction of the sigmoid and rectum, just within the sigmoid. The colpeurynter was then distended with air until no fluid could pass into the sigmoid. Coal oil was allowed to flow into the rectum till no more could be received. It was then drawn off with a catheter, and the average amount was found to be between fourteen and seventeen ounces.

He insists that the inverted position (Hanes) is much to be preferred by both patient and operator when any kind of illuminating instruments are to be employed in the rectum or sigmoid.

The Four Glass Test.—*Glass 1.* The anterior urethra is washed out carefully until the water returns clear. This gives us the contents of the anterior urethra. *Glass 2.* If a soft catheter is introduced and some of the bladder contents are drawn off into glass two, this gives us the bladder urine. *Glass 3.* The catheter is now withdrawn and the patient passes a small quantity of urine into glass three. This gives the debris washed from the posterior urethra. *Glass 4.* The prostate and vesicles are then carefully massaged and stripped, and the remaining urine is passed into glass four; this gives us any pus that may have been expressed from the prostate by massage.

THERAPEUTIC NOTES.

Hemoptysis.

C. J. Wiggers (*Arch. Int. Med.*) considers that early in the course of hemoptysis when there is occasional cough and no alteration in the breathing, the prompt relief of the bleeding should be brought about by those drugs which reduce the pressure within the pulmonary circuit; that cardiac depressants, such as chloroform and pituitary extracts, must be resorted to. In his opinion pituitary extract is the drug that possesses the ability to meet the indications.

Vomiting of Pregnancy.

J. H. Martin (*B. M. J.*) doubts the efficacy of drugging in hyperemisis gravidarum. He prefers dieting—gastric lavage, dieting and elimination. For several days he puts his patients on peptonized milk and milk and soda; then light diet. They are not allowed up until they have been on the light diet for two or three days. He gives a powder thrice daily, which powder consists of one grain of mercury-with-chalk powder and three grains of sodium bicarbonate. Where there is chronic constipation, he has found magnesium sulphate in hot water, every second morning, the best aperient. The septic condition of the mouth he treats with one in eighty phenol solution, used frequently always immediately before and immediately after food. The following are important points in the treatment: 1. Bowels to be moved at least once per day. 2. Prevention of oral sepsis. 3. Good, plain, well-cooked food, daintily served at regular hours. 4. Kidneys and skin to be kept active. 5. Gentle exercise in the open air daily if the weather is at all suitable, and a good supply of fresh air night and day.

Trachoma.

G. M. Harston (*B. M. J.*) has affected a cure in forty out of fifty cases of trachoma, in from five to eighteen applications of carbon-dioxide snow.

Pulmonary Tuberculosis.

H. Vallow (*B. M. J.*) believes that cases of pulmonary tuberculosis in the early stages are best treated with injections of a one per cent. solution of pure phenol in sterilized water. He gives 0.1 to 0.2 c.c. between the shoulders once each week.

DIAGNOSTIC NOTES.

Pericarditis.—W. E. Winter (*Clinical Journal*) says that the absence of the abdominal respiratory movement may be important evidence of pericarditis. In one of his cases in which there was no evidence of pericarditis, appendicitis was diagnosed. This loss of abdominal movement may precede by a few days or longer, and outlast the other signs of pericarditis. X-ray examination has confirmed the immobility of the diaphragm. The restriction of movement is more marked in fibrinous pericarditis.

Liver Diseases.—Frey (*Zeit. f. klin. Med.*) finds first in diseases of the liver that urobilinuria appears frequently; second, that the appearance of laevulose is a useful diagnostic accessory in liver diseases. In the diseases of the liver the latter occurs in fifty per cent., especially in the cirrhoses. The excretion of urea is of no value in diagnosis. Galactose is of no less diagnostic assistance. In the cirrhoses, the amino-acids are regularly increased.

Malignant Disease.—Fiehs and Lintz (*J. A. M. A.*) state that methylene blue is decolorized by the urine of patients suffering with malignant disease. It is also true sometimes in rheumatism, nephritis and meningitis. They state that thus far in their work it has been positive in every well-established case of malignancy. The technic is given as follows: Three to five drops of Loeffler's methylene blue is added to a test-tubeful of fresh urine—sufficient to give it a blue color. The urine is then shaken and allowed to stand at room temperature from twelve to twenty-four hours. A control fresh specimen of normal urine similarly treated is made. At the end of said time the blue color of the urine disappears. The control specimen on the other hand remains unchanged, retaining its uniform blue color.

Tabes.—A correspondent to *The Lancet*, London, England, calls attention to pruritus and its occasional relationship to tabes, especially in the early cases. Milian, the first to call attention to this, found a casual relationship in six out of 25 cases. Three were anal, one anal and periorbital, one thoracico-lumbar, and one epigastric. Milian found it always an early symptom.

Tuberculosis.—C. L. Wheaton (*J. A. M. A.*) directs attention to a new sign in diagnosing pulmonary tuberculosis. When the skin is pulled away from the fascia over the affected area, it was freely moveable and not adherent to the muscle-fascia. On the affected side the skin can be drawn from the chest wall with ease, while the skin is also thinner on that side.

Reviews

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. Volume II. Twenty-first Series. 1911. Philadelphia, London and Montreal: J. B. Lippincott Company.

Articles in this issue appear on Medicine, Surgery, Obstetrics and Gynecology, Neurology, Laryngology, Ophthalmology, Pathology and a Post-graduate Course on Wounds. There is one colored plate, many plates and numerous figures. One Canadian contributes an article, "Some Advances in Obstetrics in the last Twenty-five Years." Dr. A. Lapthorne Smith, Montreal. In this article Dr. Smith describes his method of placing the preliminary perineal stitch, as recently set forth in a communication to the *New York Medical Record.* Dr. Smith originally brought this before the American Gynecological Association many years ago. He has been employing it now for ten years, since which time he has seen no "milk fever." Our readers will find International Clinics a periodical of the utmost value. Its price is $8.00 the year, issued in quarterly volumes. Those who wish to obtain this volume can do so from Mr. Charles Roberts, 608 Lindsay Building, Montreal the agent for Lippincott's in Canada.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, A.B., M.D., Adjunct Professor of Surgery in the New York Polyclinic; Attending Surgeon to the Workhouse Hospital, and to the New York City Home for the Aged and Infirm. With 815 illustrations, mostly original. Philadelphia and London: W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Toronto.

We consider this to be one of the best books we have seen issued for some time. As the title announces, the writer has here brought together and arranged in a readily accessible manner a large number of procedures employed in diagnosis and treatment. There will be found a general description of diagnostic and therapeutic methods, as well as a description of those measures employed in the diagnosis and treatment of diseases affecting special regions and organs of the body. That there is a good field for a work of this character we are assured, and the author is to be congratulated in having brought all this valuable material under two covers. The illustrations are exceedingly ample—815—and they are splendidly executed. We heartily commend this book to all.

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COMMENT FROM MONTH TO MONTH.

The British National Insurance Bill brings strongly before the medical profession again the whole question of contract practice and the evils attaching thereto. This scheme, modelled after the German system, but going considerably further, is compulsory in its nature, and affects wage earners, men, women and young persons earning less than fifteen dollars per week. Its object is to assist these self-same wage earners during sickness and old age. To provide a fund for this purpose it is proposed that the workingman will contribute fourpence per week, the working woman threepence, the employer threepence for each employee and the State twopence for each working person.

In return for these contributions the bill will provide for the following:

1. Free medical relief with no taint of charity. The medical men attached to the friendly charities are to be better paid—an increase to $1.50 from $1.00 per patient, and wherever possible the chemist will do the dispensing and the doctor will only prescribe.

2. The benefit of thirty shillings in maternity cases, with the proviso that women are not to return to work for four weeks.

3. Special help in cases of tuberculosis.

4. Sick allowance of ten shillings a week for three months, and a permanent disablement allowance of five shillings a week to age of 70 years, when the patient will be transferred to the old age pension fund.

5. Women to receive seven shillings and sixpence for the first three months and thereafter on the same scale as men.

6. Young persons under sixteen years of age will not receive sick pay allowance, but will receive medical treatment and the use of sanatoria.

At the same time that the British Government is promoting this elaborate scheme the Germans are considering the revision and extension of the German system; and it was due to the apparent success of this scheme in Germany that led Mr. Lloyd-George to father the measure in the British House of Commons. In some quarters it has been hinted that its introduction is on the grounds of political expediency.

The profession in the three kingdoms is up in arms in opposition to the medical provisions of the scheme, and is well backed up by the General Medical Council, the Royal College of Physicians of London, King Edward VII Hospital Fund for London, Dublin University (Trinity College), the Royal College of Surgeons of Edinburgh, and the British Medical Association, a body which contains between one-half and two-thirds of the entire British profession. To this latter organization, since the bill loomed upon the horizon, several thousand of physicians have been added to its membership.

In France, Germany, the United States and Canada, the progress of the measure through the House of Commons has been watched with eager interest, and the medical press have kept their readers in touch with the entire situation. It will be of interest to all to know that the bodies above-mentioned, in Great Britain and Ireland, have shown a determined and worthy unanimity in opposing the provisions of this bill, and have even gone so far as to pledge themselves to decline to work under the measure as at first drafted. They have demanded, before doing so: (1) An income limit of ten dollars a week for those entitled to medical benefit. (2)Free choice of doctor by patient, subject to the patient's consent. (3) Absence of friendly society control. (4) The preference of the majority in local districts to decide method of remuneration. (5) Medical remuneration to be what the profession considers adequate, having due regard to the duties to be performed and other conditions of service. (6) Adequate medical

representation on the various bodies administering the act, with statutory recognition of local medical committees.

The latter, one vital feature, has been conceded, as by a vote of 387 to 15, the administration of medical benefits under the bill has been placed under the local Health Committees. In the opinion of *The Lancet* this is regarded as a triumph.

The evils of contract or lodge practice have so long been harped upon by the medical press and by a majority of the profession, and that without any visible assuagement, but with augmentation, that it is a question whether anything can or will now be done by the medical profession as a whole to offset those evils. When, therefore, the powers that be, those with the hand on the helm of the ship of state, commence an exploitation of the entire medical profession in the interests of the public and in the interests of political emergencies and contingencies, it is but the entering of the thin end of the wedge, which, whilst it would curtail the liberty and independence of the medical profession, would at the same time be in accord with the socialistic and public health tendencies of the day. It is the approach of those days, when, as Sir Lauder Brunton himself long ago remarked—those days when the medical profession would be engaged more in preventing disease than in curing the ills flesh is heir to.

One prime cause of alarm is seen in those provisions of the bill which will undoubtedly tend to very materially decrease the incomes of physicians. The anxiety in which this is viewed by the profession in the mother country, as well as the equally anxious interest manifested by the profession of other countries, is not suppositious. It is all too real. This is by reason of the fact that the patient earning fifteen dollars per week is snatched from the hand of the practitioner. But we have not to go very far afield to find instances of this right in our own Canadian cities, where patients earning under fifteen dollars per week, paying four or five dollars per week for their board, are admitted into hospitals, and denied the right to select their own medical attendant. This cuts materially into the income of many physicians and materially decreases that income. If it is unfair to do the first, surely it is equally unfair to allow the latter to obtain.

If state medicine of the character proposed in this bill is to obtain, then it is high time that the state should pay for the services rendered by physicians in charity, either in hospital or out of it. Physicians should not be expected or called upon to give of their time and their talents any more than any other class in the community.

When the state commandeers the medical profession it would seem right to do it *in toto* and upon adequate remuneration.

What is adequate remuneration?

Mistakes is a title for an address which sounds refreshing, for it is new. How few have been the papers published on this line we all know. Yet this was the title of the address in Medicine recently delivered before the British Medical Association by Byrom Bramwell. It requires courage to speak about mistakes, and he is a brave man who publishes them to the world. But we profit by mistakes, both our own and others.

Long ago we remember someone suggesting it would be a profitable night at a medical society meeting to recount mistakes, but we never remember knowing or hearing that any such *melange* was served up, for it would certainly prove a profitable, if a laughable, medley.

Now, however, that a distinguished member of the profession has had the courage to take on "Mistakes" as a title for the Address in Medicine before that august body, the British Medical Association, we may expect that "Mistakes" will come into fashion for symposia at the coming meetings of our medical societies. And, indeed, a medical society might very easily spend a night to less amusement, interest and advantage.

But there are mistakes and mistakes, some which are excusable, others inexcusable. Those whose results are unimportant may be passed by, but not so with those which may entail very disastrous consequences. Mistakes teach us this: We can learn a great deal from our mistakes. If this is so it is a wonder such a vast amount of clinical material should have been wasted and so often been disregarded. Now that the example has been set, others will pattern after it.

The Physiological Effects of Aeroplane Flying, since we have arrived at the day when an aviator may any time alight at our doors, is an appealing subject to medical men. The Paris correspondent of *The Lancet* had an opportunity of examining Aviator Beaumont when he came down from his machine after winning the prize for the European circuit.

Others have made interesting observations and have recorded them. The effects of rising to great heights in the air are similar to those seen in mountain-climbers, such as giddiness, nausea,

headache. Owing to the rapid transition from a lower level to a higher, the blood pressure does not steady itself, as in mountain-climbing. Variations are seen here, too, in individuals, as in mountain-climbing. All the observations tend to show that the blood pressure is increased but slightly, owing to the free access of air. The temperament of the individual will have a special influence upon the blood pressure. Nervous fatigue and nervous tension will lower it. In the case of Beaumont referred to, he was said to be remarkably calm, his pulse scarcely reaching 85, but he had his moments of cardiac palpitation. Naturally of a calm disposition, his added experience and long practice in flying would have considerable to do with any excitation. It has not yet been established that aeroplane flying causes any particular illness. The most constant phenomenon observed is the increase in blood pressure.

The Maritime Medical Association has passed into history. This was accomplished at its recent annual meeting in Halifax, and it was done by unanimous vote, we are told, without discussion and without regret. The object in dissolution is, of course, apparent. It is a part of the policy of the Maritime medical profession, following upon the discontinuance of publication of the *Maritime Medical News*, to do all they can to promote the interests of the Canadian Medical Association, and of course the official organ of the national medical body. This action will put a damper on the proposed formation of a somewhat similar medical society for Western Canada, the sometime mooted organization, which would be in close touch with the medical life and progress of the West.

The passing of the only interprovincial medical society in Canada leaves the road open to a closer affiliation of the provincial societies with the parent Association. But to round off the reorganization of the profession throughout the Dominion, as contemplated through the new Constitution and By-Laws of the Canadian Medical Association, it will first be necessary for each provincial medical society to establish affiliation by effecting the required and necessary resolutions, and then to proceed to affiliate with them the county and city societies in existence, or hereafter to be established.

So far as the Province of Ontario is concerned it would appear advisable to proceed to the establishment of territorial medical societies in affiliation with the Ontario Medical Association, which

societies would serve the dual purpose of incorporation with the Ontario College of Physicians and Surgeons, and at the same time be in affiliation with the Ontario Medical Association, and through that provincial medium, in affiliation with the Canadian Medical Association.

The History of the Present Cholera Epidemic being seasonable at the present time, owing to some distant manifestations, will as well prove interesting. It took its origin in India in 1902. Hindoo pilgrims, journeying to Mecca, carried it to Hebjaz. In 1903 it was in Damascus; in Bagdad in 1904. From this point it crossed into Persia, reaching the mouth of the Volga. It then spread in the Caucasus to the extent of three thousand cases. In 1905 there were six hundred cases in Poland. Then it appeared in Eastern Prussia and places in Germany—three hundred cases. In 1907, from Southern Russia to St. Petersburg, it counted its victims to the extent of thirteen thousand. By 1908 this had reached thirty thousand cases. In 1909 there were different foci of infection in Russia; it appeared in Holland, particularly Rotterdam—sixty cases. Belgium, nine cases. Ships spread it from the latter point. Every winter it died out to appear in the following spring. It is reported that in 1910 there were a total of 281,259 cases, with 131,433 deaths, in the southern provinces of Russia especially.

From Brindisi it was carried into Southern Italy. One hundred and thirty-seven localities were infected. There were in all 11,700 cases, with 768 deaths. The disease made great ravages in Turkey.

The incubation period is six days, but the dejecta of persons exposed should be examined for some time thereafter. By rigid attention to this detail Holland was able to reduce the number of fatal cases to four. Generally contracted through drinking contaminated water, it must not be lost sight of that fruit and vegetables ingested may be the cause of the disease, especially where those have been grown from soil watered with contaminated water. Even microbes may be carried into houses on the shoes through the medium of contaminated mud.

Immigrants, sailors and similar persons should naturally be subjected to strict supervision landing on American shores, as these carry the disease, the epidemic proceeding up-stream against the current. Careful attention to waste matter, disinfection of

same, exclusion of flies, are preventive measures. In fact all measures look towards the prevention of contamination through the alimentary tract.

The letter published in our September issue from the Director-General of Public Health, Ottawa, to Quarantine Officers, the Commissioner of Customs, Ship Owners, Agents, and others concerned, tells how well our Canadian shores are protected from an invasion of this Asiatic disease.

No case of cholera has developed in the United States, nor has any case arrived at quarantine since July 28th.

Since August 12th, thirty-seven cholera suspects have been detained at Grosse Isle. They were removed from the Allan liner, "Lake Erie," and are said to be Italian immigrants bound for the Canadian west.

About the middle of August there were in the Quarantine Station of the Port of New York seventeen cases.

News Items

Dr. Watson Cheyne was in Toronto in August.

Dr. J. N. Elliott Brown has returned from Europe.

Dr. George W. Ross, Toronto, has returned from England.

Dr. D. King Smith, Toronto, has returned from England.

Dr. Chas. A. Hodgetts and Major Drum are in England.

Dr. G. Sterling Ryerson, Toronto, has returned from England.

Dr. Jepson, Durham, England, paid a short visit to Toronto in August.

Dr. Good, Winnipeg, has been operated on successfully at the Mayo Hospital.

There are to be no public drinking cups after the first of October in New York.

Dr. William Warwick has resigned as Pathologist at the General Hospital, St. John, N.B.

A recent Toronto graduate requires locum tenens work for four to six months. Apply to us.

Dr. Alexander Hugh Ferguson, Chicago, who has been seriously ill, is reported recovering.

The *Canadian Journal of Medicine and Surgery* for September is a finely illustrated number.

Ottawa physician wishes to purchase practice and property near Ottawa. Vendors apply to us.

Montreal had 8,749 cases of contagious diseases in 1910. In 1907 the number reported was 4,271.

The death is announced of Dr. Frank P. Foster, for many years Editor of the *New York Medical Journal.*

Dr. A. S. Monro, Vancouver, Secretary of the British Columbia Medical Society, has returned from abroad.

Dr. J. H. Leeming, Bacteriologist to the city of Winnipeg, is working temporarily in Paris and London.

Dr. George K. McNaughton, Cumberland, B.C., has been doing extra work in Chicago and Rochester, Minn.

Dr. Ernest Hall, formerly of Toronto, Vancouver and Victoria, has taken up his residence in southern California.

"King Cook," for many years janitor of the medical department of McGill University, died recently in that city.

Dr. Edmund E. King, Toronto, has returned from a month's holidays at his summer residence in Hastings County.

The first annual meeting of the Canadian Public Health Association will be held in Montreal the 21st-23rd November.

Dr. Bruce, London, England, has been appointed Superintendent of the Tuberculosis Sanitarium at London, Ontario.

The Toronto Academy of Medicine has moved into its new quarters, Queen's Park and north corner of Grosvenor Street.

Dr. A. B. Atherton, Fredericton, N.B., formerly of Toronto, is a candidate for parliamentary honors in the pending elections.

Professor J. George Adami, Montreal, has gone to Rome to represent the Dominion Government at the Tuberculosis Conference.

The Laboratory of the Ontario Board of Health is now established in its new quarters, Queen's Park and Grosvenor Street, Toronto.

In Montreal in 1910 there were 10,221 deaths and 16,616 births.

A splendid medical practice and property is for sale in the county of Wentworth. Particulars will be given by applying to this office.

The Bill Poster's Association of Canada is granting the Canadian Association for the Prevention of Tuberculosis, $25,000 of advertising space throughout Canada.

The Ontario Board of Health had an extremely interesting exhibit at the Canadian National Exhibition, particularly as regards infant mortality, tuberculosis and milk.

Dr. Geo. D. Porter, Toronto, Secretary of the Canadian Association for the Prevention of Tuberculosis, has returned from his summer home, "Treasure Island," in Muskoka.

Tuberculosis seems to be increasing in Montreal. In 1907 there were 919 cases; 1908, 1,000; 1909, 1,114; 1910, 1,336.

A three thousand medical practice and property, unopposed, is for sale fifty odd miles north from Toronto. The property is good and the price is right. A small cash payment will be accepted. Apply to us.

Dr. Duncan Graham, formerly of Pittsburg, has returned from Germany and been appointed Lecturer in Bacteriology in the medical department of the University of Toronto, succeeding Dr. Fitzgerald, who has gone to California.

Dr. Hibbert Winslow Hill, Director of the Division of Epidemiology of the Minnesota State Board of Health, has received the diploma of Public Health from the University of Toronto, by examination. This is the first degree of that character issued by Toronto University.

Publishers' Department

Symptomatic or Complicating Anemia is that form or condition of blood poverty which results from various constitutional infections and diatheses. Prominent among such causes are, Syphilis, Rheumatism, Paludal Poisoning, Tuberculosis, Carcinoma, etc. In many instances, such an anemia is due to some obscure, latent metabolic perversion, or a slow but persistent intestinal auto-intoxication of gastro-intestinal origin. While it is an axiomatic principle that successful therapy depends upon the removal of the causative factor, it is more than often wise and eminently judicious to adopt direct hematinic treatment while the underlying cause is being sought for and combated. Pepto-Mangan (Gude) being bland, non-irritant and readily tolerable, can almost always be given, with distinct advantage to appetite, digestion, nutrition and general well-being, while causative therapy is under way. Neither constipation nor digestive disturbance results from its steady use, and a general hematic gain is practically a certainty, if its use is persisted in.

Prompt Relief in Sciatic Pain.—In reporting his experience in the treatment of sciatica, Fred E. Davis, M.D., writes as follows in *Annals of Gynecology*: "I have been giving antikamnia and codeine tablets a thorough trial in the treatment of sciatica and I must say that my success has been phenomenal indeed. I have also induced two other physicians to give them a trial and their success equals or surpasses my own. I meet with many cases of sciatica and before adopting antikamnia and codeine tablets I used a great deal of opium and morphine to relieve the pain. Since then, I have not given either. One of my patients had been confined to bed for three weeks during her last attack of sciatica. I prescribed one antikamnia and codeine tablet every four hours, and in forty-eight hours she was up and about and has not felt the pain since."

Summer Clothing for Men.—During the long spell of magnificent weather that has been such a notable feature of this Coronation year the question of how to dress comfortably must often have perplexed the professional man confined to city life, and therefore to some extent forced to observe the conventions. Of late years there has certainly been a far less rigid

adherence to these conventions than, say, 20 or 30 years ago; but the legal and medical professions, at any rate, have been on the whole conservative in this respect. With regard to headgear, the ordinary silk hat of the town dweller has long been criticized; but it must be admitted that in spite of many attempts to displace it in popular favor it remains the *sine qua non* for certain society functions, though not now so indispensable for many others where a short time ago it was quite compulsory. We do not understand why the white tall hat has fallen out of use; it was lighter to wear, cooler to look at, and, so long as there was no black band to suggest that the wearer was in mourning for the last remnants of his respectability, its appearance was cheerful. Straw hats, that now form so large a proportion of the summer headgear of our town population, are certainly cool and light; the soft panama variety looks more comfortable, but not only is it much more expensive, but from a medical point of view it has a drawback. Whatever type of hat is worn the lining should be soft and elastic, so that there is no constriction anywhere round the brow; yet the panama offers so large a surface of attack for sudden wind that it must be tight to the forehead. The air-space above the head should be ventilated. Air itself is a bad conductor of heat, and if a deep layer of air is interposed between the head and the head covering, this forms the best protection against the effects of sun, provided, of course, that the air layer is kept cool by free ventilation. Although the tall hat to some extent retains its vogue, the double-breasted frock-coat has almost disappeared for daily use; but we still seem to cling to funeral black as the appropriate hue for city life. Our climate is so variable that we cannot always assume that a fine warm morning will be followed by a hot day; therefore we cannot always at the beginning of the day dress appropriately for the ensuing eight hours or so. Woolen stuff for material, and a loose fit, will secure comfort, and protection from extremes both of heat and cold. Light colored garments are naturally cooler than dark ones, as they reflect instead of absorb the sun's rays; but a permeable texture is of much more importance than color; it is necessary for health and comfort that free passage should be allowed for evaporation from the skin, inasmuch as this is the most effective physiological means of cooling the body. Dwellers in tropical countries generally wear white cotton clothing, very light in texture, being careful, however, to protect the head from the sun's direct rays by some form of turban, and the abdomen from chill by several folds of material, forming a cummerbund. With our variable climate we must be cautious, even in the hottest weather, how far we imitate the habits of people

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Original Articles

PRESIDENTIAL ADDRESS.

By N. A. Powell, M.D.

President, Academy of Medicine, Toronto.

First, before all else, it becomes my pleasant duty to thank the Fellows of the Academy for placing me in the position I now occupy.

The honor came unsought, and is for that reason all the more appreciated. I count it no light thing to have been thought worthy to follow those recognized leaders of the profession who have been previously accorded the highest office in your Society. The evolution of the Academy from the societies, by the union of which it came into existence, is in line with medical progress the world over. In all great centres of civilized population the day of the small medical society, of the proprietary medical school, and of the ill-equipped hospital is passing or has already passed.

Modern life, with its complexity of needs has made it imperative that bigger and better organizations should replace those which formerly sufficed. To be bigger is not of necessity to be better. While in the changes that are taking place much has been gained some things of value have been lost. Nelson behind wooden walls needed a generation to gain for England what Togo did for Japan in one morning's use of what modern science had placed at his command.

The Rolph School here, the Woman's Hospital under Sims and Emmett, and the Royal Infirmary under Syme did splendid and long-to-be-remembered work, but just as it has become impossible for any one man to be a universal specialist, so has it come about

that no small school, hospital or society can by any effort, however able and however well directed, meet all needs.

> "Our own part is too vast and too complex
> For one man alone to accomplish its purpose
> And hold it shut fast in his hand."

The capital city of Ontario is rapidly approaching the half-million mark in population. Its people have doubled in numbers within the last decade, and its future as one of the great cities of the continent is already assured. On us rests the obligation of seeing that in things medical its progress shall keep pace with its advancement along other lines. A few years ago the four medical societies referred to were doing excellent work in Toronto and making the name of our city and of our country widely known. They voluntarily gave up their autonomy in order that by uniting forces one strong and progressive Society should come into existence. It is to the lasting credit of the men who composed those societies that they recognized the trend of modern progress and were content to lose their corporate individuality in promoting a scheme for the more comprehensive unifying of professional interests.

"The intuition of unity is the end of philosophy," wrote Plato.

Already they are receiving their reward in the kindlier feeling that pervades the atmosphere in which we live. Men have been brought into closer relationship, one with another, and warm friendships are replacing jealousies and suspicions which formerly were too much in evidence.

The Academy, with its great and growing library, should be the means for bringing out and of making known all that is best amongst us. A medical school is chiefly of interest to its staff and its students, and a hospital to these and to the patients who fill its wards. The Academy has no such limitations. Here all meet on a level, and one rises above another only by the better work he is able to do, or the better spirit he displays in doing it. A strong association can afford to assume a sedentary posture on any member who prefers to split hairs rather than to split differences, and whose temperamental bias is toward carping rather than helpful criticism. It would savor of the Pharisee to claim that we are free from all such elements of disturbance, but certainly with us they are minorical. Nine years ago, when President of the Ontario Medical Association, I ventured into the realms of pro-

phecy, and said with regard to certain schemes for improvement, which were then very much *in nubibus,* that "While in the past professional jealousy had been so keen and controversy so bitter that success would have been hardly a possibility. Now, *Laus Deo,* we know each other better, and out of mutual respect can come united and successful action. True, we are given to criticizing each other a good deal; but, with a rare exception, this is in the spirit of rivals rather than of antagonists. Old animosities are dying out and are not being replaced.

"The teeming future,
Glorious with visions of a full success,"

holds for us a grand, united and splendidly equipped school of medicine, doing for the students of a coming time what in an imperfect and patchy way we are striving to accomplish now.

I have faith in that future and in the men who shall sway its destinies, and believe that with absolute fairness to all real interests the wisest course can be found and followed."

Do I make an undue claim in saying that the forecast of the future then given was at least as accurate as the average of recent political forecasts in what is geographically the larger half of North America?

The boards governing our larger hospitals are fully awake to the needs of the present and of the future. The new Toronto General and the Western Hospitals are engaged in extensive building operations. St. Michael's is adding a new wing to its present building. Bearing the name of a saint, who, if my memory serves me rightly, is mentioned but four times in the Bible—and every time fighting—we shall expect this hospital to keep well in the foreground.

The Hospital for Sick Children is always adding to its facilities, and Grace, we are hoping, will soon take similar action. It may well be a matter for mutual congratulation that these various institutions through their boards and staffs aided each other in obtaining civic and other grants.

This is as it should be, but not as it would have been under conditions that formerly were present with us. I yield to no one in my admiration for what our predecessors, in the face of untold difficulties were able to accomplish. Fortunately we may honor them and honor the work they did, without being tied in any way to the precedents they established. There were giants in those days! Rolph and Widmer, Bovell and Beaumont, Hodder and Richardson, were men of whom any city might be proud.

But great lights by their very intensity cast deep shadows, and these shadows are the occasion of much stumbling. Less brilliant globes make our streets as safe by night as by day, although no one of them can be said to far outshine its fellows. That we have come closer together and are more mutually helpful is surely true, but still it would be premature to hold that the medical millennium is even within measurable distance of No. 13 Queen's Park Avenue.

Where we stand, however, is not nearly as important as the direction in which we are moving. To-night I want to speak to you regarding one line along which we may soon and rapidly advance. The members of this Academy are, I feel sure, broad enough to permit me to do this without being charged with giving undue prominence to a single institution, or to my own part in what is being done or to be done.

Demosthenes made his hearers forget the speaker in the interest he led them to take in his subject, but I am as far removed in skill as in time from that hero of our schoolboy days. Montague's aphorism, that one seldom refers to himself without detriment to the person spoken of, will warn me to guard my utterances in so far as they must be personal.

In the year 1898 it fell to the lot of the speaker to suggest a way in which a certain ample fortune could be used for the permanent benefit of our people. Many plans were passed in review before a final decision was reached. What was decided upon at last involved substantial gifts in aid of the care of sick children, of the treatment of pulmonary tuberculosis, of missionary efforts, and of various other great charities, but reserved for a single purpose the bulk of what was to be devised. This purpose was to build, equip and maintain in perpetuity an emergency or casualty hospital, which should afford prompt and skilled relief to those injured or taken suddenly ill.

That a need exists for such assistance in all large cities admits of no question. When supplied by the regular service of a general hospital it is apt to be attended by delays, and to disarrange the work of the staff. The Relief Station at Haymarket Square, connected with the Boston City Hospital, and the Hudson Street Hospital, which is the Casualty Department of the New York Hospital, are the best institutions of the kind to which I can refer. Each has a staff of its own and the patients admitted are soon transferred to the parent hospital. In Scotland a similar plan is found to be most satisfactory. In every great modern hospital a department like this must be given a place. On this continent be it remembered we have no great modern hospital complete in every

detail. Years must elapse before anything approaching the Rudolph Virchow Hospital or two or three others in Europe can become available.

If the dreams of the architects are realized, Blackwell's Island will have one and Cincinnati another, but a million people must make their homes in Toronto before anything so extensive and costly is undertaken here. By that time we shall all be elsewhere. In the meantime Browning's statement holds good:

> "The common problem, yours, mine, everyone's,
> Is not to fancy what were fair in life,
> Provided it could be—but finding first
> What may be, then find how to make it fair
> Up to our means."

Now an emergency hospital is of necessity altruistic rather than revenue-producing. Its per diem and per patient cost must be out of all proportion to what is usual throughout the country. A hospital board with deficits to face can hardly apportion to one department such as this all that is needed to maintain it at its maximum degree of efficiency. On the other hand the board of a general hospital to which patients can be transferred is the best possible body in which its control can be vested.

My suggestions were accepted by the donors at the time, and subsequently by the General Hospital Trust. This latter body also agreed to place the general direction of the Shields Emergency Hospital, as it will be called, under the chiefs of the surgical service, and asked me to undertake with the architects the work of building and organizing this special department. It is with real pleasure that I now refer to the way in which Mr. Flavelle, Chairman of the Trust Board, the President of the University, the Deans, past and present, of the Medical Department, the Professor of Surgery, the Chiefs of the Surgical Service and the architects have always in all ways given their assistance in what has so far been accomplished.

The names of the donors were withheld until last year, when litigation regarding the site selected led to their publication. Let me break the seal of my own silence through all these years and say that Agnes and Jane Shields, in loving memory of their brother, John Shields, have made possible this addition to the city's facilities for giving aid to the suffering. Horace wrote: "I have builded unto myself a monument more enduring than brass." Surely in what they have done for humanity these noble women have builded

better than they knew, and their names will be honored by generations yet to come and by thousands to whom their gift will bring relief in times of sore distress. "*Divinum est opus sedare dolorem.*" These words through all the centuries come down to us from that far isle which held Hippocrates. In spite of the burden of her years, the one who is still with us follows with deepest interest the progress of the building and the plans for its outfitting. As she has discussed these matters with me I have seen the joy of giving in her eyes, and the words of Dr. Holmes have crossed my mind: "If the good Lord will go on making splendid women He must not blame us for thinking too much of His earthly manifestations."

An ambulance service, with swift, self-propelled vehicles, such as are needed in a city stretching twelve miles along the lake and running half as many miles back from the water's edge, will form a part of the equipment. It is designed to have house surgeons go out with the ambulances in answering all calls. The cost of the hospital when complete will approximate $75,000. It will have five operation, dressing or clinic rooms and 22 beds.

A belief that every physician in Toronto, and in particular every Fellow of this Academy, will at times find this new department a god-send has led me to take it up in addressing you to-night. Its work must be upon broad lines, and with due and fair regard for all interests. The interest, first of all, of the sick or injured person, then of his family physician, then of the one who was called upon to give first aid, then of the students here for instruction—all these and many others must be considered and adjusted in a spirit of fairness. The difficulties will lessen notably if we all remember that in what it is given us to do "One is our Master and all we are brethren."

Within the spirit and letter of the bequest it has seemed to those of us who have the matter under advisement that, outside the regular work of a casualty department, the facilities to be provided may be made useful in a number of ways. Time permits me to refer only to two of these: the teaching of advanced surgical technique in a very personal and practical way and the illustration by stereoscopic and other photographic procedures of the surgical work going on.

If asked to name one particular in which the men who are graduated in medicine with us most seriously fall short, I would answer at once: "In the practical aspects of their surgical training." They spend numberless hours over oil immersion lenses and become facile in their use, their nates are indurated and they run

the risk of developing Ischial Bursitis by sitting out long didactic courses; they watch operations at long range and through or around assistants, but until they become house surgeons they are not taught the use of their own hands in doing or in assisting to do surgical work. Later they learn these things at the expense of their patients, or they do not learn them, and so muddle along in practice. Regarding scores of candidates whom I have recommended for hospital internships across the line, the common report has been: "Your men are clever and energetic, and well up in theory, but they show little evidence of practical surgical training."

Baden-Powell tells grown-ups as well as boy scouts that one of the worst habits which may be acquired is that of looking on while others do the work. The right way is to learn to do things right by doing them under supervision, and the earlier this is done the better. We do well what we learn, early in life, to do automatically, and "timely knowledge is no hurt," as the wife of Odysseus told him. It is as easy to learn intestinal anastamosis on material hot from an abattoir as on a portion of human alimentary canal—and it costs less for funerals afterwards. The control of hemorrhage during operation and the immobilization of fractures may be taken to illustrate the need of the training of the hand. The followers of Ambrose Pare put back the use of the ligature for almost a century by tying masses from which bleeding came, instead of isolating and exactly ligating the cut vessels. To-day en masse clamping and tying goes on in ways that add new traumatism to tissues already devitalized. Complications naturally and commonly follow. What shall it profit a man to have been taught, in a theoretical way, the last refinement of aseptic surgery while still untrained in the deft and skilful handling of tissues with impaired vitality? One sees too often a wound sponged with the movement used in blacking a boot, or a granny knot placed where only a reef should have been tied. Now a reef knot can be tied in at least seven different ways. One single-hand method and one (not Heath's) in which both hands are employed are far and away better than the plans in general use and described in our text-books. Teach these modern methods to a student and he will soon make with unvarying accuracy as many knots in a minute as the Mauretania can make in an hour! We cannot expect him to have "Eyes to find the five which five hundred shall survive" out of all the surgical procedures he may see followed by different operators, but the best of these should be taught him practically. From my own student days, I recall an unforgettable sentence in a clinical

lecture by Sir James Paget: "When I have seen Sir Wm. Ferguson operate I have not known which to admire most, the perfect skill of hand with which everything was done or the perfect way in which every step of the operation had been thought out and provided for." Work like this is ideal. The other kind is still too common. Dr. Schultz, in Manitoba in the early days, put up fractures in bark splints padded with moss and secured by buckskin thongs. He acquired merit by doing it in that way and at that time. We all appreciate the value of resourcefulness such as he exhibited, but the foresight which provides at its best whatever may contribute to the recovery of an injured person is more to be commended than any skill in extemporizing makeshifts. My honored teacher, Frank H. Hamilton, warned me not to learn how to put up fractures in outdoor climes where the work, at that time, was done in haste, cheaply and roughly. The advice would have less force to-day, but still the need for speed and for economy may militate against the employment of means which the surgeon himself considers to be the most efficient. Having given to the teaching of surgical technique more time and attention probably than any of my colleagues, I feel the more free to point out seeming defects as well as possible means for that correction. Our students and recent graduates go to London or Edinburgh, to New York, Baltimore, Chicago or Rochester, Minn., to watch operations and to learn the methods by which leading surgeons attain success. Now the percentage of success is as great here as anywhere else, and yet the students do not largely attend operations. They claim that to do so is a waste of time. Given a range of thirty feet and one appendix removal looks like any other one. What wonder then that a series becomes monotonous? The remedy appears to be in making students practically familiar with what is undertaken and giving them a chance to follow the details of operation work. This will hold their attention and they will come to appreciate the ever-changing problems which lie at the point of the scalpel.

I am glad to tell you that, after consultation, those in authority have thought it best to approve of a large clinic room in the Emergency Hospital being set apart for surgical demonstration and fitted up with a lantern and whatever else may be found of advantage. With such facilities it ought to be possible to prevent any candidate for a degree making, as one did recently, a mistake in the sex of a catheter, not to mention errors of a graver nature. One other line of projected usefulness remains for a moment's consideration. Toronto operators have done and are doing most creditable surgery. Their methods and their results have not been pre-

sented to the profession as fully as has been the work done in other cities. One reason for this may be that our surgeons are tongue-tied with modesty. Another doubtless is that artists to illustrate the various methods devised or conditions encountered are hard to find and expensive when found. Now by stereoscopic and by color photography it has become possible to portray with great fidelity almost anything that may require illustration. A plant for doing such special work in photography will be available in the new hospital, and whatever assistance can be given in preparing illustrations for papers written by the members of the Academy will be freely at their disposal.

In conclusion may I ask of the members of our Academy a sympathetic co-operation in making the gift now spoken of, a real blessing to the people for whom we care. With your help and with the continued assistance of the gentlemen whom I have mentioned it may be given me to see what will amply repay the study I have given to the problems of emergency surgery for more than a dozen years and in more than a dozen cities. I want to see the new charity started on right lines and doing much good before my time comes to join the group of shades shepherded by Hermes Psychopompus on the banks of Acheron. It may be that all will be forgotten when my camp is pitched in the fields of Asphodel and my canoe glides over the waters of Lethe, but at least I want to take away with me a feeling that I had the confidence of my fellow-workers and that their confidence was not wholly misplaced.

THE MEDICAL PROFESSION IN ONTARIO—A LEGAL AND HISTORICAL SKETCH.*

By the Honourable William Renwick Riddell, LL.D., Etc., Justice, King's Bench Division, High Court of Justice, Ontario.

The history, from a legal point of view, of the medical profession in our Province is interesting both to physician and to lawyer. I have in some instances gone to the original sources, but make no pretence to originality: much of what I write has been said before by others (particularly by Dr. Canniff), and some by myself.

Our Province began its independent career as a separate Colony in 1792, having theretofore from 1763 been part of the Province of Quebec, which included a vast territory composed of what is now Quebec and Ontario and also the whole hinterland of the English colonies down to the mouth of the Mississippi.

Full legislative power was given to Upper Canada by the Constitutional Act, 31 George 3, C. 31, which separated the Province from the rest of British America.

At the time of this separation of our Province and for some time thereafter, there was no regulation as to who should practise medicine, or "physic," as it was called. Many of the practitioners were old army or navy surgeons; some were importations from the United States, but most of those who treated disease were mere empirics. There had, indeed, been an Act or Ordinance passed by the Council of the old Province of Quebec in 1788, forbidding anyone to practise without a license from the Governor, which license was to be granted without an examination to all graduates of any British university and to all surgeons of the army or navy—but this was largely a dead letter in the newer parts of the colony, as our country was at that time.

In 1795, the Provincial Parliament of Upper Canada passed an Act, 35 George III., C. 1, forbidding the sale of medicine, prescribing for the sick and the practise of physic, surgery or midwifery by anyone who had not been licensed. The Governor was to appoint a board to examine all who should apply for a license, and those approved of by them upon the examination were to

*Prepared for the Ontario Medical Association meeting, May 31, 1911.

be granted a license—the fee being £2 currency, *i.e.*, $8. A penalty of £10, *i.e.*, $40, was imposed for selling medicines, prescribing for the sick or practising physic, surgery or midwifery without a license. An exception was made for surgeons or surgeons' mates in the army or navy, and for those who had been practising at the time of the passing of the Act of 1791; these, however, were not to take apprentices or students. There is no record of anything ever having been done under these provisions; the Act was found unworkable, and it was accordingly repealed in 1806 by 46 George III., C. 2, and the profession was again much at large, although the Act of 1788 already spoken of was still nominally in force. Much public dissatisfaction was the result, and at length a new Act was passed in 1815, 55 George III., C. 10, which forbade prescribing for the sick or the practise of physic, surgery or midwifery without a license—saving the case of graduates of a university in British Dominions, surgeons and surgeons' mates in the British army or navy, and those who had practised before 1791. The prohibition against these taking apprentices or students was not repeated in this Act, nor was the prohibition against selling, etc., medicines. And it was expressly provided that women might practise midwifery without a license. The Governor was to appoint an examining and licensing Board.

Nothing seems to have been done under this Act either, and it was repealed in 1818 by 59 George III., C. 13, which, however, contained much the same provisions. A board of five was to be appointed to hear and examine all persons who desired to practise physic, surgery and midwifery, or either of them, and, if satisfied, certify the same to the Governor, who would, if satisfied of the loyalty, integrity and good morals of the applicant, grant a license. But women were still to be allowed to practise midwifery without a license, and graduates of a British university and army and navy surgeons and surgeons' mates were still favored. The Governor's Private Secretary was to receive 20 shillings ($4) for each license.

A slight amendment was made in 1819 by 59 George III., C. 2, whereby each applicant was to pay 10 shillings to the Secretary of the Board.

The first meeting of the Board took place January 4th, 1819, Messrs. James Macauley, Christopher Widmer, William Lyons and Grant Powell, surgeons, being present, and the next day, John Gilchrist, of my own old Township of Hamilton, was examined and received a license to practise physic, surgery and midwifery. This gentleman was one of a well-known family of physicians, and was known in Cobourg and vicinity as "Dr. John." This Board, with

a short interruption, continued to sit (with, of course, from time to time changes in personnel) until 1865. They examined with some rigor, and granted certificates, sometimes for one, sometimes for two, and sometimes for all three branches of the profession. Of those rejected, instances are to be found of many deficient in Latin and classical knowledge, several with a diploma from the Faculty of Physicians and Surgeons of Glasgow (one of whom was "quite ignorant of chemistry and pharmacy"), one with a diploma from the Apothecaries' Hall, one who had served five years' apprenticeship to an army surgeon, etc. It is quite plain that the examination was no mere formality.

In 1827, by 8 George IV., C. 3, the Act was amended and new provisions introduced—all those holding a license or diploma from a British university, or from the Royal College of Physicians or of Surgeons, London, or a commission or warrant as physician or surgeon in the British army or navy, were entitled to a license without examination; also those residing in Upper Canada before the war of 1812, who remained in the Province during that war and produced a certificate of their competency from three or more licensed practitioners. Practising without a license was made a misdemeanor.

In 1839, by 2 Vic., C. 38, all previous legislation was repealed, and those who had been members of the Board under the previous Acts were formed into a corporation to be known as "The College of Physicians and Surgeons of Upper Canada," of which the members were to be Fellows: all other persons then or thereafter authorized to practise physic, surgery and midwifery were to be Members of the College—and the College was to license. Provision was made that women might practise midwifery, and that all with a diploma or license from any British university or from any College or Faculty of Physicians or of Surgeons in the United Kingdom, and also all army and navy surgeons, should receive a license, etc., etc.

The Fellows met from time to time, but owing to the efforts of the Royal College of Surgeons, London, the Act was disallowed by the Home authorities in 1840, and the former Act came into force again.

A new Board was commissioned by the Governor (Lord Sydenham), and examining and licensing went on as before.

In 1841, by 4 and 5 Vic., C. 41, it was provided that any person who was or should be licensed or authorized as a physician or surgeon, or both, either in Upper Canada or in Lower Canada, should be authorized to practise also in the other Province.

In 1859, the statute 22 Vic., C. 47, recognizes for the first time homeopathy as a lawful system of medicine. Five gentlemen (among them Dr. John Hall, of Toronto) were appointed a Board to examine according to the doctrines and teachings of homeopathy. They issued a certificate, upon which the Governor granted a license as in the case of practitioners of the regular school.

The Acts were consolidated in 1859, Con. Stat. U. C., cc. 40, 41.

The Thompsonian or Botanic School, which was founded by Samuel Thompson in the '30's, and which had in the course of evolution become the Eclectic School, received legislative recognition a little later. In 1861, 24 Vic., C., 110, a Board of seven gentlemen (amongst them my own old preceptor, Richard Hare Clarke, M.D., of Cobourg) was formed to examine according to the doctrines and teachings of Eclectics. They were to certify, and the Governor to license, as in the case of the homeopaths.

All these Boards were abolished in 1865 by Act. 29 Vic., C. 34, which formed a "General Council of Medical Education and Registration of Upper Canada," composed of one representative from each of the colleges authorized to grant medical degrees—the University of Toronto, of Queen's College, of Victoria College, and of Trinity College, and the Toronto School of Medicine, and also twelve elected by the profession. After the 1st of May, 1866, every practitioner was to be registered under this new Act. Those entitled to registration were those formerly licensed in Upper or Lower Canada, those certified from the four Upper Canadian universities or any university in British Dominions, those having a diploma of the R. C. Surg., L., or R. C. Phys., L., registered under the Imperial Medical Act or commissioned as physician or surgeon in the British army or navy. The Council might fix the matriculation standard, and also the curriculum to be observed by the medical colleges. This made the medical profession of all schools into one body in law.

An amending Act was passed the following year, 1866, 29 and 30 Vic., C. 54, chiefly affecting matriculation and the standard of medical studies.

Upper Canada ceased to exist, and Ontario was born, 1st of July, 1867. Less than two years thereafter the law was again changed: 32 Vic., C. 45, incorporated the profession into "The College of Physicians and Surgeons of Ontario," formed a Council composed of one representative each from the University of Toronto, Queen's University, University of Victoria College, University of Trinity College, Royal College of Physicians and

Surgeons (Kingston) and Toronto School of Medicine—twelve representatives to be elected by the Regular School, five by the Homeopaths and five by the Eclectics. A Register was provided for, and all those actually practising before 1st January, 1850, and all those already registered, etc., were to be placed upon the Register; but for all future aspirants, a Board of Examiners was provided, to be elected by the Council, one from each teaching body and nine from other members of the College; and neither Homeopath nor Eclectic was to be examined in Materia Medica, Therapeutics, Theory or Practice of Medicine, or in Surgery or Midwifery (except the operative practical parts thereof) by any but those approved by the representatives on the Council of his School of Medicine. The curriculum, etc., was fixed by the Council.

The repealing Act of 1874, 37 Vic., C. 30, re-enacted most of the provisions of the former Act of 1869, without substantial change; a provision is made for Homeopathic students attending Colleges in the United States or Europe, and the five Eclectic members of the Board were to continue such for five years, but to have no successors.

The Act of 1887, 50 Vic., C. 24, changes the Council. One member each is to be chosen by the University of Toronto, Queen's University, University of Victoria College, University of Trinity College, the Royal College of Physicians and Surgeons (Kingston), the Toronto School of Medicine, Trinity Medical School, the Ottawa University, Regiopolis College and the Western University.

But while in the Act of 1874 the Council had power to refuse to register or remove from the register only those who had been convicted of felony, by this Act this power is given in cases in which the accused has been convicted either in Her Majesty's Dominions or elsewhere of an offence which, if committed in Canada, would be a felony or misdemeanor, or has been guilty of any infamous or disgraceful conduct in a professional respect. This provision has been considered by the courts on a recent occasion.

The provisions of the Act of 1891, 54 Vic., C. 26, are of no great importance; that of 1893, 56 Vic., C. 27, increased the representation of the regular profession to 17 members, and reduced the term from five years to four.

By the Act of 1895, 58 Vic., C. 28, the power of fixing tariffs was taken away from the Division Associations.

The number of representatives was increased from 17 to 18 by the Act of 1910, 10 Edw. VII., C. 77, which also excused the Council from the duty of making enquiry when any Court of

Record in the Province had decided that any practitioner had committed a criminal offence in connection with his profession; upon receipt of proof of such decision, the Registrar was immediately to erase his name from the Register.

Education and Medical Schools.

In early days there were no medical colleges or schools in Upper Canada. Apprentices and students were received by practitioners, and those desiring to attend medical lectures were compelled to go to McGill or to the United States or the mother country. What became the medical faculty of McGill seems to have been founded as a private enterprise in 1823 or 1824, and it became a College of McGill University in 1828.

Of those submitting themselves for examination by the Medical Board of Upper Canada, some produced diplomas from the College of Physicians and Surgeons, Glasgow; others from the Apothecaries' Company, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Dublin; the Royal College of Surgeons, London; McGill College; University of Paris; University of Edinburgh; University of Maryland; University of Pennsylvania; University of Berlin; and tickets from lectures at Bowdoin College, Dartmouth College, *Fairfield College, University of New York, Berkshire Medical Institution (Massachusetts), Geneva Medical College (New York), University of Glasgow, Borough Hospital (London), Jefferson Medical College, Willoughby University (Ohio), etc., etc.

A University for Upper Canada had been projected as early as 1795. A Charter was obtained from George IV., 15th March, 1827, for the University of King's College, "at or near our Town of York, in our said Province of Upper Canada," with power to grant degrees of Master of Arts and any degree in Divinity, Law or Medicine. This Charter was amended by the Provincial Legislature in 1837, March 4th, by the Act 7, Wm. IV., which annexed Upper Canada College and abolished religious distinctions and

*Fairfield Medical College began in 1809 as an unincorporated institution known as the Academy of Medicine of Fairfield, at a small village, Fairfield, not far from Little Falls, N. Y. In 1812 it was granted a charter by the State Legislature, under the style "College of Physicians and Surgeons of the Western District of the State of New York," known as Fairfield Medical College. This, it is said, was the sixth medical college organized in the United States. From 1813 to 1839 lectures were given at Fairfield, Frank Hamilton delivering his first course of surgical lectures at its last session. Geneva Medical College, of Geneva, N.Y., had been chartered in 1834, and its first course of lectures was given in 1835. When Fairfield Medical College closed its doors (which it did after the session of 1839-1840), some of its Faculty, including Hamilton, joined the staff at Geneva. This College continued until 1872, when it removed to Syracuse, N. Y., becoming the Medical Faculty (College of Medicine) of the Syracuse University. This is still in active operation, with an attendance of about 150 students.

tests. The foundation stone was laid April 23rd, 1842, and the University formally opened June 8th, 1843, with (amongst others on the staff on paper) Professors of Chemistry, Anatomy and Physiology, Materia Medica, Obstetrics, Practical Anatomy and Surgery.

Lectures began in January, 1844, with a staff, in fact, of six professors, namely, Professors of Anatomy and Physiology, Theory and Practice of Medicine, Principles and Practice of Surgery, Obstetrics and Diseases of Women and Children, Materia Medica, Pharmacy and Botany, and Practical Anatomy, respectively. It is interesting to note that Dr. J. H. Richardson, so well known, and whose memory is so dear to many of us, was one of the two matriculated students at that first session. Dr. Richardson had previously studied under Dr. John Rolph in Rochester, N.Y., where this extraordinary man was practising, having been obliged to leave Upper Canada owing to the troubles of 1837. Dr. Rolph came back to Toronto in 1843, and took students who did not intend going to the University and prepared them for the Medical Board. This resulted in his founding the "Toronto School of Medicine," certainly before 1848, and this school was incorporated in 1851 by Act 14 and 15 Vic., C. 155. No degree-conferring powers were granted, however.

The name of the University was in 1849 changed to the University of Toronto by the "Baldwin Act," 12 Vic., C. 82, and its completely non-denominational character established. In the following year certain medical men organized another School of Medicine, "The Upper Canada School of Medicine." So that, in 1850, there were in Toronto three schools of medicine—the University Faculty of Medicine, the Toronto School of Medicine (Rolph's School), and the Upper Canada School of Medicine (Hodder's School). This last, during the same or the following year, became the Medical Faculty of the newly-established Trinity University, and had its locus on the west side of Spadina Avenue, just north of Queen Street.

The Medical Faculty of the University of Toronto did not last long thereafter. The Act of 1853, 16 Vic., C. 89, limited the functions of the University to examination and graduation, and instituted a College—University College—for Arts teaching, providing (Section 32) that after 1st of January, 1854, there should be no professorship or teachership of any of the branches of Medicine or Surgery except as part of a general system of liberal education. This provision the political gossip and scandal of the day charged as being due to the influence of Dr. Rolph, whose School was sup-

posed to be suffering from the competition of the State University.

Rolph's School became, in 1855, the Medical Faculty of Victoria University; and having originally been at 53 Queen Street, in 1854 it removed to Richmond Street, between Yonge and Bay Streets, and in 1857 went to the new College buildings in Yorkville.

Soon, too, the Trinity Faculty lapsed (that is, in 1856), and advantage was taken of the charter which Dr. Rolph had obtained in 1851, but which was now no longer needed for his school, to organize a new school, in form and name a continuation of the old Toronto School of Medicine. This began operations in 1857 in affiliation with the University of Toronto; and Dr. Hodder soon took its presidency. He resigned his position to become Dean of the new Medical Faculty of Trinity University, which was organized in 1870-1871; but the Toronto School of Medicine continued under Dr. W. T. Aikins as President.

The Victoria Faculty lapsed in 1875, and the Trinity Medical Faculty became a separate body, "Trinity Medical School," by Statute in 1877, 40 Vic., C. 65.

The Ontario Medical College for Women began operations in 1884-1885 in Toronto, and another in Kingston a little later, while the Western University Medical Department at London was in operation by 1882-1883.

In 1887 the Toronto School of Medicine became, in substance, the Medical Faculty of the University of Toronto (though retaining its identity), and in 1903 the two Medical Schools, the Toronto School (then, in fact, the Medical Faculty of the University of Toronto) and the Trinity Medical College or School became one, and were united as the Medical Faculty of the University of Toronto. The Ontario College for Women continued until 1906. In that year the University Medical Faculty arranged to provide women students with all the facilities enjoyed by men. The *raison d'être* of the College for Women thereupon ceased, and that College closed its doors.

The Western University School still is in active operation.

The Medical College at Kingston began as the Medical Faculty of Queen's University.

A University with the name, "The University of Kingston," had been incorporated by Provincial Act 3, Vic., C. 35, in connection with the Church of Scotland, with power to confer degrees in all Faculties. This bill was disallowed by the Home authorities—for what had Presbyterians to do with a University?—but in 1841 the young Queen granted a charter to an institution under the name of "Queen's College at Kingston," and that body was made

the recipient of all the property of "the University at Kingston" by 9 Vic., C. 89.

The Medical Faculty of the new University began lectures in 1854, graduating its first class in 1855. In 1866, however, the Medical Faculty separated from the University, having obtained legislation for that purpose, and the Legislature having created a new corporation, the Royal College of Physicians and Surgeons at Kingston, affiliated with Queen's University. This body again united with the University in 1892, and has since continued a Faculty of the University. The Women's Medical College at Kingston was also merged.

Anatomy.

In olden times there was no provision for obtaining subjects for dissection, and many were the gruesome stories told about "resurrection men," and about doctors and their students robbing new-made graves. Some of these stories had a modicum of truth, but most were sheer fabrications.

In 1843, for the first time, the Legislature interfered. The Act 7 Vic., C. 5, recites that it is impossible to acquire a proper or sufficient knowledge of surgery or medicine without a minute and practical acquaintance with the structures and uses of every portion of the human economy, which requires diligently pursued courses of dissection, and then provides that the bodies of those found dead, publicly exposed, or who, immediately before their death, had been supported by or in any public institution, should—unless the person so dying should otherwise direct—be delivered to teachers of anatomy or surgery, either public teachers or private teachers having at least three pupils, and provided that *bona fide* friends or relatives might claim the bodies for interment. An Inspector of Anatomy was to be nominated for every city having a Medical School, who should keep a register of all unclaimed bodies given up for dissection, and also of all medical men qualified to receive cadavers for dissection, inspect the dissecting-rooms, etc., etc., being paid £1 5s ($5) for each body.

In 1863, by 26 Vic., C. 42, patients dying in a Provincial lunatic asylum were excepted; they were to be decently interred.

The Act of 1885, 48 Vic., C. 31, gave the relations or *bona fide* friends of the deceased 48 hours to claim the body, and ordered the medical school receiving a body to keep it for five days, and if claimed within the five days it was to be given up. It was also forbidden to send or take any body out of Ontario for anatomical purposes.

In 1889, by 52 Vic., C. 24, the time for friends, etc., to claim a body was reduced to 24 hours, and these are now the provisions of the law. See R. S. O. (1897), C. 177.

The first dissecting room in Toronto seems to have been built in 1843 or 1844 for the Medical Faculty of King's College, and that Faculty first occupied a frame building on the north or west of the west wing of the College building.

HOSPITALS.

There was certainly a Military Hospital at Kingston from the time the British first took possession of that part of Canada. I do not find any record of a hospital in Toronto until about 1812, although no doubt one did exist. In 1819 an advertisement appeared in the official *Upper Canada Gazette,* asking for tenders to build a brick hospital in the Town of York. It was erected soon after and acquired some note, the building being occupied for several sessions by the Legislature after the fire of 1824 had destroyed the Parliament Buildings.

In 1830 an Act was passed authorizing a grant of £100 to this Hospital.

In 1830 a public meeting was held at Kingston to build a public hospital, while in 1832 the Medical Board of Upper Canada speaks highly of the Hospital at York (Toronto), and the opportunity it affords medical students of observing diseases and their treatment. In this year the York Dispensary was established, but died in a year for lack of funds.

In 1844 the Board of Trustees of the Toronto Hospital offered the whole of the upper flat of the Hospital to the Medical Faculty of the University, but the terms could not be agreed upon. It then had a whole block of land bounded by King, Adelaide, John and Peter Streets.

By 1850 there were in Toronto not only the Toronto General Hospital, but also the Toronto Eye Infirmary (S. E. corner of Church and King Streets), the Toronto General Dispensary and Lying-in Hospital (established in 1848), and two other Maternity Hospitals.

Ever since the times I have been writing about, the Toronto and Kingston General Hospitals have been utilized by the teachers in the Medical Colleges for clinical instruction. So, also, in London, for the Western University Medical Faculty.

CASE OF LINEAR ATROPHY OF THE SKIN.

By J. P. Kennedy, M.D.
Surgeon to Wingham General Hospital.

Cases of linear atrophy of the skin, due to trophoneurosis, are not, I believe, uncommon in the practice of the dermatologist. It occurs, too, as the result of injury during growth, pregnancy and other conditions in which the skin is subject to stretching.

The following case I thought might be worth reporting: Mr. L. W. L. presented himself on April 6th, 1911, with the following history: Patient was 29 years of age. He always enjoyed good health; in fact had never had any illness of any sort excepting the

diseases incident to childhood. He was a healthy, ruddy, robust-looking man, employed as a traveller for agricultural implements. He had recently become very corpulent, and a few days before presenting himself at my office had noticed on the lower left quadrant of the abdomen four parallel lines following the fibres of the external oblique downwards and inwards. These lines varied from three to six inches in length. They looked exactly as if the skin had been scorched by a red hot iron, and averaged about an inch in breadth. On the right lower quadrant of the abdomen was a line precisely similar in appearance to those on the left, about eight inches in length and rather more than an inch in breadth, following

the course of the fibres of the external oblique downwards and inwards. These areas were distinctly depressed, which could readily be felt in running the finger across them. On pinching up the affected skin it was felt to be thinner than that of the surrounding parts.

The accompanying picture illustrates the condition beautifully.

HEART DISEASE.

Wm. F. Boos, L. H. Newburgh and H. K. Marks (*Boston Med. and Surg. Jour.*) report that digipuratum, a dry digitalis extract, has now been used in the Massachusetts General Hospital for over a year, and more than one hundred and eighty cases of primary heart disease or secondary involvement have been treated with it. The diuresis was efficient in all cases, and the pulse-rate usually exhibited a marked improvement. It was usually given in the form of treatment of twelve tablets each, and if the first was of little value a second course was always effective. Venesection, or tapping, will accomplish good results with it. There was not a single case of vomiting or diarrhea, and cumulative poisoning was never observed. The pulse may drop forty or more beats suddenly without harmful effects. Digipuratum seems to be a drug of reliable strength with which to push digitalis therapy in a manner not heretofore known by the profession.

DIABETES.

Dr. Lecerf (*Am. Jour. Med. Sc.*) says that the most striking point about the soy bean is that it contains no starch, or only a very small quantity. A number of cases of diabetes have been treated with it as a food diet, with excellent results, and in nearly every instance there was a marked diminution of glycosuria. The beans may be taken as a vegetable by soaking them twelve to sixteen hours until the skins come off, and stirring until the skins rise to the surface, when they can readily be removed. They can be then boiled in salt water or with bacon, seasoned with pepper, salt and butter and served hot. They can be used in gruels, broths or biscuits.

Medicine

Graham Chambers, R. J. Dwyer, Goldwin Howland,
Geo. W. Ross, Wm. D. Young.

Hookworm Disease. E. E. Endicott, Jackson, Cal. (*Journal A. M. A.*, September 30), reports his observations on hookworm disease in the deep mines of California. He believes that it has been a contributing cause, if not a direct cause, of death in many cases reported as due to "miners' consumption" or some other symptomatically diagnosed condition, and he doubts whether there are any deep mines in the United States which have been in continuous operation for a number of years, in which foreign laborers are employed who have worked at the business abroad, that are not more or less infected. As regards the difference between the American and European species, the symptoms produced are practically the same, and the European species has certainly been naturalized long enough to be a native by this time. Endicott gives the well-known symptoms and treatment of the infection, and recommends as a prophylactic method the insistence on proper toilet conveniences in mines and thorough cleansing of the miners and disuse of their working clothes on coming out. The extent of the infection makes it improbable that we can at once destroy the germs in the infected mines. The sanitary regulations made should be strictly enforced.

Hookworm Remedies. A report of the therapeutic investigations on the various hookworm remedies is made by W. H. Schultz, Washington, D. C. (*Journal A. M. A.*, September 30).

Only the results are given, as the details of the experiments, with the discussion of still other remedies studied, will appear in the bulletin of the hygienic laboratory in the near future. The remedies here reported on are thymol, beta-naphthol, male fern and Hermann's mixture of eucalyptus and chloroform. The author concludes that any practical vermifuge, to be efficient against hookworm, must be an irritant of sufficient intensity to paralyze the neuro-muscular apparatus of the parasite, make it loosen its hold and prevent its fresh attachment. Its toxicity for the parasite must be much greater than that for the host or its absorption must

be more rapid in the parasite. The intestinal contents of the host must be expelled at an early enough period after taking the remedy to prevent the absorption of the surplus drug or that of the poisoned worms. At present thymol is one of the most toxic vermicides for hookworm. It is easy to obtain, keeps well, is cheap, easily administered and kills the parasites instead of merely paralyzing them. When taken under the care of a physician who is careful to gauge the dose to the condition of the patient, it seems to be the best all-round remedy thus far studied. While dangerous in large doses it differs from beta-naphthol, male fern and chloroform in that the danger is at once apparent, and can be controlled by heart stimulants and methods that help maintain a good blood-pressure until the drug has killed the parasite and a cathartic has removed the excess of thymol. With the other remedies mentioned the danger signals are less obvious, and irreparable damage may be done before the peril is detected. Beta-naphthol is probably the next pure chemical substance that ought to be tried more extensively on human hookworm patients. Those affected with kidney lesions should not take it, and the urine should be frequently examined. If the maximum amount of 2 to 4 gm., given in two doses, an hour apart, does not cause renal disturbances it has much to recommend it as a hookworm remedy. Male fern does not give much promise in this country owing to the unreliability of the preparations obtainable here. This would probably be remedied, however, if there was much demand for it. He does not find reliable data as regards the value of Hermann's mixture, and seems to prefer instead a simple chloroform and castor oil combination, which, if it should act as favorably in human beings as it has for him in dogs, may turn out a valuable universal worm remedy. The real remedy for hookworm disease, however, is the proper disposal of all fecal matter, so that infection is rendered impossible.

Epilepsy.

R. H. Spangler (*N. Y. M. J.*) reports his results in the crotalin treatment of 36 cases of epilepsy. These cases were given 1-200 grain of rattlesnake venom hypodermically at intervals of five to seven days. This venom treatment is indicated in the idiopathic form of the disease. Under this treatment the character of the convulsions is modified, the interval between the attacks lengthened, and both the mental and physical condition of the patient improved. A solution of the venom of definite and uniform strength should be used.

Genito-Urinary Surgery

T. B. Richardson, W. Warner Jones.

A Few Plain Truths about Arsenobenzol. Gottheil. (*New York State Journal of Medicine.*) Abst. *Therap. Gazette.*

Writing under this title, Gottheil says that he restricts himself to a bald statement of the results of his study of arsenobenzol. He embodies them in a series of propositions which he thinks can be sustained.

1. Arsenobenzol does not "cure" syphilis any more than mercury does, and perhaps less than mercury does. This is true of one or two doses of the new drug, the effect of which is comparable to that of a few mercurial injections. It does not "sterilize" the body.

2. Arsenobenzol is a powerful symptomatic remedy for the leutic phenomena, in some cases acting quicker and more vigorously than mercury, in others being equal to the older drug in therapeutic action, and in still others being ineffective.

3. Symptoms of persisting infection, wrongly called "relapses," appear rather more quickly after one or two arsenobenzol injections than they do in the course of an effective mercurial medication. This is to be expected when it is understood that complete sterilization with one or two injections is impossible. Long-continued action is required, as the mercurial medication attempts to effect.

4. Cases recently infected, in which the symptoms may be expected to appear in rapid succession, are the ones by which the efficacy of the arsenobenzol must be estimated. Isolated tertiary phenomena, appearing after long intervals of apparent health, may, when healed, be followed by symptomless intervals of indefinite length under any treatment, or under none at all. No conclusions as to the lasting effects of the new remedy can be drawn from them.

5. Since complete sterilization of the body cannot be effected by arsenobenzol, the intravenous administration of the drug, by means of which the system is subjected to the very fugacious action of a large amount of the arsenic, does not seem to be indicated save in exceptional cases. Intramuscular injection, as more lasting, would seem to be preferable; and it is very possible that the future may teach us that the best results are to be attained by the administra-

tion of much smaller doses in prolonged courses, exactly as is done with mercury.

6. There are disadvantages and even dangers incidental to the arsenobenzol medication, concerning which we are still insufficiently informed; and we do not yet, and shall not for a long time, know its ultimate effects. It is not therefore to be recommended to the profession at large for the general treatment of luetic disease.

7. On the other hand we do possess a remedy, which we know all about, which is of undoubted efficacy, and which does cure syphilis. Mercury is still the anti-syphilitic for general use, and we cannot do without it. The best proof of this is the fact that the latest advice from quarters where the arsenobenzol has been longest and most extensively employed, and where the prejudice is all in its favor, is to use it first, and then to proceed to the regular and prolonged mercurial treatment as before.

8. Cases of syphilis recalcitrant to mercury, or with an idiosyncrasy against the drug, do occur, but by no means with the frequency that recent reports would indicate. Inefficient medication or a possibly unconscious bias in favor of the newer treatment accounts for many of them.

9. Arsenobenzol, in the experience of the author, has been specially efficacious in some cases of early syphilis of severe type, especially those showing ulcerative dermal lesions, mucous patches, and condylomata; and in some late and obstinate tertiary affections, such as palmar and plantar squamous lesions, leucoplakia syphilitica, gummatous infiltrations of the internal organs, etc. In most cases its symptomatic effect is equal to that of mercury; and like this latter drug, it sometimes fails entirely.

10. It is generally conceded that arsenobenzol is as useless as mercury for the syphilitic sequelæ after organic changes have occurred. It has not given results in late brain or spinal cord disease due to the infection.

11. With our present information the writer considers arsenobenzol indicated in the following classes of cases of the disease:

(a.) In early cases of specially severe type, in which the disease manifestations are multiform, or follow each other with great rapidity, or do not seem controllable by efficient mercurial treatment.

(b) In cases of persistent or recurring infective lesions like mucous patches, in which the danger to the patients' surroundings must be minimized by the quickest possible removal of the infective foci.

(c) In cases in which circumstances do not permit persistent and prolonged mercurial medication, as in travellers, prostitutes, etc.

(d) In cases of late syphilis of especially obstinate or recurrent type.

(e) In cases in which immediate and most energetic action is required to save an organ or to prevent irreparable tissue damage.

(f) In the rare cases in which mercury does not act, or in which it cannot be given.

12. Arsenobenzol does not seem to be indicated:

(a) In the ordinary run of cases of syphilis, on account of our ignorance of its permanent action on the disease, and of its dangers, and because we possess other harmless, perfectly efficient, and well-understood means of medication.

(b) In cases that have lesions of the internal organs, more especially of the kidneys or of the eyes.

(c) In cases suffering from the after-effects of syphilitic processes, when permanent organic changes have occurred.

In conclusion, the author states his belief that we have in arsenobenzol a permanent addition to our antiluetic armamentarium, and one that will enable us to cope more successfully than has heretofore been possible with certain phases of the infection; but that we have no more got a cure for syphilis, save in the sense and with the limitations that mercury is a cure, than we had before its introduction, and that the mercurial medication is required in every case no matter whether arsenobenzol has been used or not.

Acne Vulgaris.

Burke (*Pac. Med. Jour.*) treats this disease locally as follows: The patient is ordered to vigorously scrub his face every night with green soap and hot water. The comedones are dissolved out by the soap; the scrubbing removes them mechanically, and tones up the skin. The face is then rinsed with cold water and dried; then this ointment is applied: Beta-naphthol, 5 per cent.; sulphuris praecip., 25 per cent.; saponis viridis and adipis lanæ, of each 35 per cent. This is allowed to remain on the face from fifteen minutes to one hour and then wiped off. A prolonged contact is to be avoided.

Reviews

Merck's Manual. New York: Merck & Co.

When advance copies of the fourth edition of Merck's Manual were received from the printer's last June, we announced in the Canadian medical and pharmaceutical journals that a few copies had been set aside for English-speaking persons in other countries than the United States. The price for these copies was set at 35c. each. Since then many requests for the little book have been received from Canada, accompanied by gratifying expressions of good-will and of confidence in the Merck label.

In acknowledgement of the interest shown in the Manual by our Northern neighbors, we have decided to offer it for distribution in Canada upon the same terms as those obtaining in the United States. Hereafter, then, any physician, pharmacist, or chemist in Canada may secure a copy of the book by making application, stating his profession or business, and enclosing the forwarding charges of ten cents (in silver).

Allbutt & Rolleston's "A System of Medicine."

The second edition of Allbutt & Rolleston's "A System of Medicine" has been completed by the recent publication of the ninth volume. The set actually consists of twelve volumes, as Vols. II. and IV. are each divided into two parts, and a special volume has been added on "Gynæcology."

The new edition has been so extensively revised and so largely rewritten that it has become practically a new work. It provides the most up-to-date, comprehensive and authoritative record of medical progress and opinion available at the present time.

Vol. 1.—*Prolegomena and Infectious Diseases*, contains new articles on Exercise in the treatment of disease, and on X-rays, while the important article on the General Pathology of New Growths has been entirely rewritten by Dr. F. W. Andrews.

Vol. 2.—*Infectious Diseases* (continued), *Intoxications.* The article on the General Pathology of Infection has been almost entirely rewritten by Professor Ritchie. New articles have been added on the Pathology of the Streptothrix Infections and Food Poisoning.

Vol. 3.—*Tropical Diseases and Animal Parasites.* This volume is entirely new in arrangement and largely so in substance. After due consideration it has seemed most convenient to include all the animal parasites in this volume, and not to divide those of importance in tropical climates only from the others.

In order to provide an authoritative account of the animal parasites and carriers of tropical disease, a knowledge of which is of the greatest importance to those engaged in the study and practice of Tropical Medicine, special articles by zoologists have been included.

Vol. 4.—*Certain General Diseases; Diseases of the Stomach,* contains new articles on Pulmonary Osteo-Arthropathy, Achondroplasia and Congenital Hypertrophy of the Pylorus. The following articles have been entirely rewritten: Diseases of the Mouth, Appendicitis, Intestinal Obstruction, and Visceroptosis.

Vol. 5.—*Disease of the Liver, Pancreas, Ductless Glands and Kidneys.* In volume five the articles dealing with the affections of the Thyroid Gland have undergone extensive change. Prof. George R. Murray has written an entirely new account of Myxœdema, and Dr. Hector Mackenzie has almost rewritten the other articles. A new article on the difficult subject of Status Lymphaticus has been written by Dr. John Thomson, who also deals with Infantilism. Professor Haliburton's new article on Oedema is inserted here.

Dr. William Hunter has supplied a new article on Delayed Chloroform Poisoning, and the various diseases connected with the blood-vessels of the liver, including Multiple Abscesses and Suppurative Pylephlebitis, have been described by Dr. Herringham.

Vol. 6.—*Diseases of the Nose, Pharynx, Larynx, Trachea and Ear.* In order to render the articles on the Nose and Throat more accessible to readers specially interested in these subjects, it appeared advisable, in the second edition, to issue them in a separate and smaller volume. When this had been decided, Sir Felix Semon, who has assisted the editors with advice and help in the most generous manner, suggested the inclusion of the Diseases of the Ear, as this addition would probably be welcomed by many readers desirous of possessing a complete handbook of these subjects. This addition has been made under the supervision of Dr. McBride, who has constantly advised the editors, and spared neither time nor trouble on the task.

The sections on Diseases of the Nose, Pharynx and Larynx have been very considerably extended, and have been further supplemented by entirely new articles on Direct Laryngoscopy, Tracheoscopy, Oesophagoscopy, and Gastroscopy, by Mr. Waggett, and

on Diseases of the Trachea, by Sir Felix Semon and Dr. Watson Williams. The addition of colored Plates and of Figures in the text should add to the utility of the work, which will serve as an authoritative treatise on these important subjects.

Vol. 7.—*Diseases of the Respiratory System; Disorders of the Blood.* The account of Aero-therapeutics has been transferred from the original Vol. 1, so as to be in closer relation to the Diseases of the Lungs, to which it almost exclusively refers. Dr. Perkins has written new articles on New Growths of the Bronchi, and on Abscess and Gangrene of the Lung, and has collaborated with Dr. Frederick Roberts in the description of New Growths of the Lung and of the Pleura. The article on Pleurisy has been revised by Dr. Horder, and Dr. Bosanquet has dealt with the Diseases of the Thymus Gland.

The remainder of the volume contains what may perhaps most conveniently be described as the Disorders of the Blood. Completely fresh articles on Polycythæmia and Erythræmia, and on Cyanosis have been contributed by Dr. Parkes Weber and by Dr. Garrod.

Vol. 8.—*Diseases of the Heart and Blood Vessels.* In this volume Professor Sherrington's original introductory article on Cardiac Physics has been revised by Dr. James Mackenzie, who has added an account of the peripheral circulation, including arterial blood-pressure; this justifies a change in the title of the article to that of Physics of the Circulation. Dr. J. Mackenzie's influence on this branch of medicine is further seen in the numerous tracings which he has generously placed at the disposal of the authors of various articles. An entirely new article on Stokes-Adams disease has been contributed by Professor Osler and Dr. Keith. The article on Over-Stress of the Heart has been rewritten, and contains a section by Dr. R. W. Michell, the outcome of his special opportunities of watching university athletes. The account of Functional Disorders of the Heart has been largely rewritten and a new article on Aneurysm has been contributed by Professor W. Osler.

Vol. 9.—*Diseases of the Muscles, the Trophoneuroses, Diseases of the Nerves, Vertebral Column and Spinal Cord.* Extensive changes have been made in this volume: the section on Diseases of Muscles has been considerably enlarged, more freely illustrated, and reinforced by additional articles on Amyotonia Congenita (Dr. James Collier), Myasthenia Gravis (Dr. Farquhar Buzzard), Family Periodic Paralysis (Prof. J. Michell Clarke), and the Neuritic Type of Progressive Muscular Atrophy (Dr. F. E. Batten).

The advances of Neurology during the past ten years are reflected in the numerous changes necessitated in the section on Diseases of the Nervous System. Dr. Mott's authoritative and admirably illustrated "Introduction to Neuro-Pathology" is an entirely new article, as is Sir William Gower's contribution on Medical Ophthalmology.

Vol. 10.—*Diseases of the Brain and Mental Diseases.* Under the heading, Meningitis, Dr. Batten has contributed a new article dealing with all forms of meningitis except the tuberculous. Other new articles in this volume are those on Acute Polioencephalitis, by Dr. F. E. Batten; on Recurrent Paralysis, by Professor J. Michell Clarke, and on Apraxia and Agnosia, by Dr. James Collier.

Vol. 11.—*Diseases of the Skin. General Index.* The necessary changes are so extensive that this section is a rewritten rather than a revised successor to that of the first edition. The important articles on the "Bacteriology of the Skin," "Eczema" and "New Growths" have been rewritten by Dr. Whitfield. Among the new articles contributed by Dr. Adamson are those on "Generalized Exfoliative Dermatitis," "Pityriasis Rosea," "Pityriasis Rubra Pilaris," "Blastomycosis," "Sporotrichosis," "Calcareous Deposits in the Skin" and "Affections of the Nails." The important subject of "Tuberculosis of the Skin" has been entirely rewritten by Dr. J. H. Sequeira, and J. M. H. Macleod has contributed new articles on "Pruritus" and "Parapsoriasis." The inclusion of numerous illustrations in the text should enhance the value of the volume, which should prove an authoritative work on the subject.

It also contains a General Index to the complete work, occupying ninety-nine pages.

Vol. 12.—" *Gynecology.*" The authors of the two chief surgical articles in the first edition, viz., "Ovariotomy" and "Hysterectomy," have been removed from us by death, and the articles by Prof. J. W. Taylor and Prof. H. R. Spencer, which take their place, are entirely new. Additional surgical articles dealing with the Antiseptic and Aseptic Technique, Minor Operations Upon the Uterus, Vaginal Hysterectomy and Colpotomy, and After-Treatment of Gynecological Operations, have also been found necessary. The article on " Plastic Gynecological Operations," although not rewritten, has been extensively modified.

Three of the articles in the first edition have been omitted altogether, and eighteen are now republished after careful, and, in some instances, laborious, revision, in order to bring them fully abreast of modern theory and practice.

From the standpoint of craftsmanship these handsome volumes reflect great credit on the publishers.

Members of the medical profession can arrange to examine this edition by writing the Macmillan Co. of Canada, Ltd., 70 Bond Street, Toronto.

Manual of the Diseases of the Eye For Students and General Practitioners. By Chas. H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Columbia University, 1890-1903; Ophthalmic Surgeon to the Mount Sinai Hospital, New York, etc., etc. Seventh edition. Revised. With 362 original illustrations, including 22 plates with 62 colored figures. New York: William Wood & Company. 1911. Price, $2.00.

It is not long since we favorably reviewed the last edition in these columns. The book remains the same in size, but has been made up-to-date by the treatment of the newer subjects, such as Lagrange's operation for Glaucoma, the use of "606" in the treatment of ocular affections, the injection of tuberculin and Kronlein's operation. There is also a new chapter on the ocular manifestations of General Diseases. As we have said before this is an excellent volume for the student and general practitioner.

W. H. L.

Lippincott's New Medical Dictionary. A Vocabulary of the Terms used in Medicine, Dentistry, Veterinary Medicine, and the Allied Sciences, with their Pronunciation, Etymology, and Significance. Including much Collateral Information of a Descriptive and Encyclopedic Character. By Henry W. Cattell, A.M., M.D. (U. of P.), Editor of *International Clinics*, Fellow of the College of Physicians of Philadelphia, etc. Freely Illustrated with Figures in the Text. Second Edition. Philadelphia and London: J. B. Lippincott Company. Canadian Agent, Mr. Charles Roberts, 608 Lindsay Building, Montreal.

That there should be so great demand for a medical dictionary as to call for a second edition of this most excellent work within one year is not at all surprising when the surpassingly comprehensive scope of it is understood, known and appreciated. It must assuredly be very gratifying to the editor and publishers that this dictionary has met with the extremely favorable commendation of the profession. New illustrations are added, over five thousand additions and changes have been made, and upwards of five hundred new words have been incorporated in the text. Modern medi-

cal terminology calls for an extensive vocabulary. That the editor has been able to make this complete and up-to-date through a careful examination of medical literature and at the same time to make a judicious, exact and compact selection, has, no doubt, been a task of the greatest and most arduous application. He, however, reaps the full benefit of that task in his splendid endeavor and can well pride himself upon having placed before the medical profession a book of the utmost importance to every member thereof. Beautifully bound in flexible leather, with thumb index and with introductory explanatory notes, the book is a model of the publisher's art. The whole production is admirable and is exceedingly well worthy a place in the library of every physician, dentist and veterinarian. In fact, we do not see how anyone could get along without it. The Canadian agent, Mr. Charles Roberts, 608 Lindsay Building, Montreal, will be pleased to forward literature and further particulars.

Can Sympathetic Ophthalmia Follow a Non-Perforating Traumatism of the Eye?

In the *Ophthalmoscope*, August, 1911, Mr. T. Harrison Butler treats of this interesting subject. In his search through the literature he did not find one authentic case of sympathizing inflammation without a perforating wound in the exciting eye, except, of course, the cases which sometimes happen where it follows an intraocular growth. He points out that sympathetic inflammation sometimes follows the perforation of a corneal ulcer, if some operative interference be undertaken, such as cauterization, iridectomy or corneal section. Ophthalmologists are pretty much decided that the answer is "No" to the question which is the subject of the paper, and Mr. Butler answers "No," but yet he would consider it a risk to spare an eye which had become blind from a plastic inflammation following a non-perforating injury in which the eye was soft and tender and in a condition of phthisis bulbi.

W. H. L.

Dominion Medical Monthly

And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH.

Politics and General Elections are of no particular concern to the medical profession, but the advent of a new Federal Government will bring into view new men and new situations. Bright and keen themselves to institute reforms, the time will be opportune for the Canadian Medical Association to reopen the negotiations for the consolidation of the various medical services at present administered under five different departments of the Crown.

It would seem scarcely necessary to point out the anomalous condition of affairs, wherein one, if not the leading department, is administered under the Hon. the Minister of Agriculture, another, under the authority of Inland Revenue, another under the Department of the Interior, and so on. It has been long recognized that confusion is the result of this diffusion of service, and that better administration would accrue by a consolidation of the services under one department, administered by a responsible minister.

Whilst we are bound to say that the Laurier Government always listened freely and courteously to the advances made by the Canadian Medical Association and promised consideration, it was commonly understood that the difficulty in carrying out these urgent and desired recommendations and reforms was due to inter-de-

partmental influences; in a word, due to "patronage." This, then, is the obstacle to surmount, and the national medical body should lose no time in pressing this subject upon the attention of the new administration.

A new and strong committee should be at once organized, and the entire ground gone over again with assiduity and perseverance.

Twenty Years' Practical Experience in Modifying and Pasteurising Milk for Infant Feeding ought to count for much. It is the succinct story of the experience of Mr. Nathan Straus, of New York, the founder of infant milk depots, and was presented by him at the third International Congress for the Protection of Infants, Berlin, Germany, Sept. 1911. He was the official delegate to this Congress from the government of the United States.

The appalling waste of child life and the recognition of the perils of raw milk, led Mr. Straus twenty years ago to establish the first milk depots in New York City. This, together with the modification and pasteurization and instruction to mothers to feed and care for their babies properly is the method which has found pronounced success in America.

In 1892 the death rate amongst children was 96.5 per 1,000; in 1910 it had been brought down to 45.8, a steady annual reduction.

Recognizing the vast possibilities of the work, as well as the incapability of any single individual to carry it on single-handed, Mr. Straus early endeavored to interest municipalities in it, and succeeded.

But not alone to municipalities should the work be confined, but churches also can do their part, as well as other charitably disposed organizations.

Pasteurization of milk is proving itself, and is to-day recommended by the highest authorities on the subject.

The Present Status of Cancer Research calls to mind the fact that it is now about ten years since experimental investigation of this great problem took on new and active life. This was due to active work by Loeb, and Jansen, a Danish investigator.

Prior to this time all investigations were practically of a microscopical order and so hypothetical theories as to the cause of cancer were expounded. From this arose the two theories, the pre-natal influence and the acquired abnormality.

Cohnheim elaborated the theory as regards the separating of embryonic development groups of cells from their normal relations

during development, which cells remaining quiescent, on being set into activity, rapidly proliferated into a cancer. In the other changes of a chemical, physical or structural character took place in the cells, thus taking on new functions and new activities.

Our knowledge advanced when it was discovered that cancer could be transmitted from one animal to another—and this knowledge has been gained by experimental means. True, it has been known for many years that the lower animals developed cancers similar to those seen in human beings, that in certain kinds they appeared more frequently than in others, that spontaneous cancers occurred in rats and mice.

When cancer has been experimentally transmitted from one animal to another, that is, when the cancer cells are grafted on a normal animal and when these cancer cells grow, divide and multiply, then we have growing cancer cells of the first animal in the second animal. As a rule the cells of the second animal take no part in the growth. And this cancer so inoculated can be transmitted to other animals almost unlimited.

But with this increment of knowledge and with this experimentation on animals, as yet no definite results have been discovered as to the cause of cancer.

The part or role heredity plays cannot be definitely assigned, any other than that we know or believe that heredity plays its part in the transmission of qualities favorable or otherwise to the growth of the cancers so transplanted.

The role played by micro-organisms, as evidenced by the occurrence of the disease in certain districts, epidemics of cancer cases, repeated occurrences in houses or families has been studied for a number of years and may seem to point to such as an origin, but it will be well always to bear in mind other causes as well as heredity in these cases.

So far as bacteria, yeasts or specific parasites go in the causation, experiments have so far failed to establish any true cancers resulting from the injection of these self-same parasites.

It has been proven too that in inoculated cancers pure chemical and physical factors have caused increased or diminished activity; and the study of tissue growth is throwing more light upon cancer growth.

To the study of cancer in lower animals we owe the opportunity to test various methods of cure or prevention, but as yet no cure has been established. Drugs, serum or vaccines can do nothing once it has started to grow. But on the other hand some definite results have been obtained in rendering animals resistant to the disease.

The X-rays and radium, the newest remedies in the treatment of cancer, have in some cases proved effective, but in the majority of cases failure has been recorded here as elsewhere. They have been more effective in the superficial cancers.

Therefore, it seems that while modern experimental work has failed so far to establish the cause of cancer, it has definitely proven that the problem is intimately related to cell growth. It is patent, then, that future work must be directed along this line.

In the United States there are six laboratories or funds devoted to search after new knowledge of cancer, at Harvard University, the State Cancer Laboratory at Buffalo, the Crocker Cancer Fund, administered under the surveillance of Columbia University, Cornell University, the Barnard Free Skin and Cancer Hospital, and the Rockefeller Institute.

Under the Imperial Cancer Research Fund, England is conducting experimental and statistical work. Berlin has two institutes. So also at Heidelberg, at Moscow and the Pasteur Institute in Paris work is being conducted along similar lines. Then there are numerous private as well as hospital investigators.

As usual we are behind the times in Canada in having neither a special fund nor a special institution for the prosecution of this research work.

Toronto had 90 cases of typhoid in August.

Dr. Albert A. Macdonald is visiting in Quebec.

Dr. Fred J. Tees has returned to Montreal from a trip to the coast.

The death occurred recently of Dr. Francis W Hall, Victoria, B.C.

Toronto has 418 cases of tuberculosis under supervision of the city's nurses.

Dr. Ernest Jones, Toronto, has returned from Germany, where he read a paper before the International Congress of Medical Psychology.

Dr. J. George Adami is on his return to Montreal, from Rome. Dr. Adami has been elected President of the Montreal City Improvement League.

Dr. Charles Trow, Toronto, died suddenly on the morning of the 8th of October. He had been in his usual good health on Saturday previous. The late Dr. Trow was attached to the Ophthalmic Department of the University of Toronto and also to the Toronto General Hospital.

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And Ontario Medical Journal

Vol. XXXVII. TORONTO, DECEMBER, 1911. No. 6

Original Articles

THE ROLE PLAYED IN THE GENITO-URINARY SYSTEM BY THE COLON BACILLUS.*

By G. Shearman Peterkin, M.D., Seattle, Wa., U.S.A.

The author, in the full sense of the word, does not know the role played in the genito-urinary tract, by the colon bacillus. It is, as yet, an undeveloped field of research. The object of this paper is to *show* that it is a field of such practical possibilities that it should be investigated, even by the general practitioner and surgeon, inasmuch as the application of our knowledge of the subject to-day will enable one to make diagnoses in what were formerly obscure pathologic conditions.

To demonstrate the truth of the above statement, the following cases will be reported:

Case 1.—Mrs. W.; married; aet., 40: no children; no history of injury or disease of bladder or kidneys. Operation, hysterectomy for uterine fibroid, 1904.

Feb. 26, 1910, while working at wash tub, was taken with colicky pains in left kidney which radiated to bladder, accompanied by burning sensation in bladder and urethra, with frequent desire to urinate.

Attack of colic lasted three hours; frequent urination, with burning sensation, continuing; at end of three days, patient sought advice of physician.

Previous Treatment.—Urotropine, gr. 4, four times daily; at end of week, santal oil substituted, 10 minims, three times daily for three or four days; some improvement. X-ray, negative.

*Read before British Columbia Medical Association, Aug. 31, 1911.

Ten days after onset of urinary symptoms an attack reported as influenza. Symptoms, aching over whole body; general malaise; mild chill, with temperature of 103 to 104. Symptoms lasted four days. At commencement of attack of influenza, all bladder symptoms immediately ceased; end of three days, symptoms of influenza abated; patient out of bed. Bladder symptoms reappeared, but were controlled somewhat by mild irrigations of boracic acid and nitrate of silver solution. As symptoms remained stationary (frequent burning, desire to urinate and dull pain occasionally over left kidney) solution of 1,500 nitrate silver was injected into bladder.

Symptoms aggravated immediately and continued to March 20, 1910, when patient was referred by Dr. J. W. Cline, of Tacoma.

Further investigation into subjective history showed habitual constipation with absence of bowel movement for two days previous to onset of symptoms; intake of fluids limited, frequently only two or three cups of tea daily.

Examination (physical and laboratory).

Catheterized urine from bladder contained pus, mucus and epithelial cells and great number of micro-organisms; no casts. Bladder cystoscopically, showed general cystitis, with one area posterior to trigone, much denuded. Ureteric openings, normal. Rate of efflux and volume of urine, normal.

Both ureters catheterized; no obstruction; no hydronephrosis. The urine obtained from each ureter was opaque—especially from the left and contained number of pus cells, some connective tissue, but more especially *clumps* of pure *organisms,* microscopically shown to be bacilli.

Morphological characteristics, indefinite. Possibilities, bacilli coli; typhoid bacilli or bacilli of influenza, judging from history.

Cultures, subcultures and differential tests made.

Results.—Colon bacillus, for it coagulated milk within 24 hours; produced acid on litmus agar; formed gas in glucose fermentation tubes, 25% in 24 hours; did not liquify gelatine; some forms preserved their motility after 24 hours.

Diagnosis.—Infection of urinary tract by colon bacillus, hematogenous, because history of severe attack of constipation accompanied by small amount of fluid ingested previous to onset of symptoms.

Treatment Advised.—Absolute rest in bed; liquid diet; flush kidneys with Poland water; santal oil (fresh), 10 ms., every 2 hours until 8 doses; then one every 4 hours; irrigate bladder twice daily with hot boracic acid solution; autogenous vaccine.

End of 7 days, specimen of urine showed no pus; very few bladder cells; number of bacteria; frequently found in genito-urinary tract; entire absence of micro-organisms, originally found.

April 20, physician reported complete recovery; urine clear.

Case 2.—Mrs. B. (referred by Dr. Henry Dalton, South Bend, Wash.). Married; one child; aet. 38; general appearance, good; weight, 165 lbs.; sleeps very well; appetite, fair; frequent indigestion. Bowels, constipated; much flatulency. Fluids ingested, two or three cups tea daily; no coffee, nor milk; some days, two or three glasses water; other days, no water at all.

Two operations, one for rectal fissure, and repair of cervix and vagina, five years ago.

Operation later for prolapsed kidney; suspension, to cure symptoms. Patient complained of following urinary symptoms: Frequeney, nocturnal, two or three; diurnal, 5 to 6, varying, sometimes less often; sometimes with greater frequency; occasionally, for two or three days, every hour or so, imperative.

Pain at end of urination; also pain over right kidney, colieky in character. Did not respond to various forms of treatment for urinary symptoms, so was referred, Jan. 11, 1910.

Tentative Diagnosis.—(By family physician). Prolapse right kidney; kinking of ureter; cystitis; retroflexed uterus.

Examination, 24 hours' specimen urine: Specific gravity, 10.25; reaction, acid; urea, 16.5; chlorides, 11 gms.; no albumen; no sugar; no casts; no indican; bacteria, numerous, bacilli predominating.

Examination conducted with and without anesthesia, as were cystoscopy and ureteral catheterization.

Cystoscopy without anesthesia, bladder, cystitis, marked in posterior part of trigone and about right ureter; right ureteric opening, elevated; somewhat patent; efflux, delayed, but volume good. Retroflexion of uterus would explain the appearance of ureter, by causing the elevation of the trigone forward and to the right, thus forming a slight pouch to right side of same. This retained at least one-half drachm of urine; position of uterus also causing a curve in right ureter, narrowing its lumen, judging from the amount of force necessary to catheterize to pelvis. This narrowing combined with inflammation at mouth of ureter and in ureter would account for symptoms of renal colic; the taking of cold or an attack of constipation, causing the inflamed mucous membrane to become congested so as to still further narrow the lumen of ureter.

Catheterization of both ureters showed them free to pelvis.

Urine came from catheters as follows: Right side: Start delayed

for 10 minutes; left side, for 25 minutes. Within five minutes after start, 20 c.c. of urine, clear as spring water, was voided from both ureters, dropping, not characteristically intermittent. This amount in so short a time after delay at onset, due to nervousness. That this flow was due to nervousness and not to hydronephrosis, was corroborated when the patient later was catheterized under an anesthetic.

Examination, under anesthesia, of uterus and adnexa showed uterus retroflexed and fixed; tubes, normal. Rate, color of urine, etc., from each catheter, normal.

Microscopical examination showed urine normal, except a few pus cells and numerous bacilli in urine from right kidney.

Cultures and subcultures showed these organisms to be bacilli coli.

Result of indigo carmine, phloridzin and cryoscopy:

Right.	Left.
Phloridzin, 35 min.	Phloridzin, in 20 min.
Indigo carmine, 20 min.	Indigo carmine, 15 min.
Cryoscopic, 1:50.	Cryoscopic, 1:30.

X-ray plates of both kidneys showed absence of renal calculi. Blood examination, showed no leucocytosis.

Summed up, though all symptoms complained of were urinary, there was no indication for treatment directly to the urinary tract, either surgical or medical.

Diagnosis.—Hysteria, due to or caused by a spastic condition of the intestine. This intestinal condition caused the coli bacilli to invade the urinary tract and the presence of these organisms, combined with the accumulation of gas in the intestine, which diminished the capacity of the bladder caused the urinary symptoms complained of.

Examination of stool confirmed diagnosis of spastic condition of intestine.

Patient placed under appropriate hygienic and dietetic treatment; recovery, complete.

Case 3.—Mrs. P.; aet. 32; housewife; children, two; referred by Dr. W. C. Heussy, Seattle.

Previous history, outside of urinary symptoms, negative; urinary symptoms, frequency, nocturnal 5 to 6; diurnal, 8 to 10; frequency, especially after heavy lifting, taking cold, etc., being aggravated; as often as every half hour. Pain at end of urination; loss of weight; frontal headache, indigestion at intervals; constipation with much flatulence. Health previous to last child, 5 years ago, good.

Previous Treatment.—Perineum and cervix repaired, three years ago to relieve symptoms; has had bladder irrigation and has taken all forms of internal medication for same; at one time, confined to bed for three weeks with bladder irrigations; symptoms improved, but upon resuming occupation symptoms returned, and at present, Feb. 2nd, 1911, are as bad as ever.

Physical examination of pelvic organs showed lacerated perineum; pronounced cystocele; cervix protruding almost outside of vagina on straining.

Cystoscopic examination showed general cystitis with denuded mucous membrane at the mouth of bladder; much inspissated pus in cystocele pouch.

Ureters catheterized; no hydronephrosis; no calculi; no obstruction to ureters. Urine from each kidney showed few pus cells; many bacilli; few staphylococci; no casts; same micro-organisms present in catheterized specimens from bladder.

Diagnosis.—Mixed infection, staphylococci, few; coli bacilli predominating.

Treatment Indicated.—First of all was surgical, necessitating cure of the cystocele; otherwise hygienic, dietetic or local treatment would be no more efficient than it would in a male with a large prostatic pouch, that retained so efficient a culture medium. Accomplished by repair of the cervix, perineum and curettement and suspension of the uterus. Uterus suspended by scarifying anterior surface and sewing both round and broad ligaments to the scarified area; ligaments overlapping to the extent that cervix as felt per vagina, was in its normal position.

Treatment.—Dietetic and hygienic; also local. Local treatment, irrigation of bladder with permanganate solution twice daily, because of presence of staphylococcic infection; otherwise, boracic acid would have been employed.

After leaving hospital, these irrigations were administered by patient herself. Salol, grs. 7, were administered every four hours. Autogenous vaccine, mixed, coli bacilli and staphylococci were administered once a week; at first one billion; later, three billions.

June 20 (four months later) urine, except for presence of few coli bacilli, clear, absence of all symptoms.

July 7th, cystoscopic examination showed uterus still in place; bladder mucosa, normal.

Case 4.—L., male; aet., 38; married; 2 children; lineman; referred by Dr. L. L. Love, Tacoma.

History negative, except gonorrhea at 18, mild attack and no complications; no history of typhoid.

Present attack.—Previous to Apr. 7th patient felt tired out; general indisposition; dull ache over kidneys and could not do his work. Apr. 7th, had attack of colic over left kidney, followed by increased frequency; pain upon urination; no temperature. Frequency for few days was every half hour or so; on Apr. 18th, visited for first time a physician. Urine showed pus; no blood; had no fever nor chills. At present, constipated and gas present with much intestinal flatulency.

Temperature in afternoon, 99; sometimes 100. Gave history of having had severe attack of constipation two days previous to Apr. 7th; now drinks 4 to 5 glasses of water daily, but previous to attack only 2 glasses; sometimes not that; drank two or three cups of coffee daily, this often being the limit of fluid ingested. Since Apr. 18th, had lost much weight. Diet bread and milk only. Frequency of urination continued, nocturnal, once or twice; diurnal, 6 to 7 times, as did the general malaise.

Cystoscope showed slight congestion of trigone; right ureteric opening, normal; left, slightly elevated, with slight congestion surrounding same.

Examination catheterized specimen from each kidney showed following:

Catheterized Urine.

Right Kidney.	Left Kidney.
App. contains slight floc. suspension.	Floc. sediment, much blood present.
Color, straw color.	Same.
Reac., acid.	Acid.
Sp. gr.	Sp. gr.
Albumin, no.	(blood present)
Numerous leucocytes.	Few leucocytes.
Very few r. b. c.	Much blood.
Few sq. cells from pelvis occurring in masses.	Very few sq. cells from pelvis.
Very few bacilli.	No bacteria.
No T. B.	No T. B.
Cultures made, growth after 18 hours (B. coli).	Culture, no growth.

Diagnosis.—Coli bacilli infection of left kidney due to constipation and indigestion of insufficient quantity of water.

Treatment.—Dietetic and hygienic; no local treatment; no vaccine advised. Patient's recovery reported.

Case 5.—S., seaman; married: aet. 36; four years ago nephrectomy of left kidney. Patient said kidney was destroyed by disease; was not told that it was tubercular. Nephrectomy took place after 5 months' treatment in Marine Hospital, where patient was confined to bed and bladder irrigated twice daily.

Since date of operation, general condition has improved; frequency of urination continued. No treatment for urinary symptoms after operation was advised nor for constipation.

History previous to operation and urinary symptoms, negative, except for constipation; alcohol excessive at times; G. C. 8 years ago.

July 15th, cystoscopic examination showed bladder capacity 4 ounces; general cystitis; no evidence of tuberculosis; bladder walls infiltrated and thickened.

Catheterized bladder specimens showed no T. B.; much pus; numerous bacilli. Cultures and subcultures showed infection to be one of pure colon bacillus.

Diagnosis.—Coli B. infection, no doubt primary to operation rather than secondary.

Treatment.—Dietetic, hygienic, local and autogenous vaccine.

Condition much improved.

Gentlemen,—Reviewed collectively, these cases demonstrate:

1. That diagnosis of many urologic conditions by means of microscope alone and subjective symptoms, are antiquated methods.

2. That modern methods mean the use of cystoscope, ureteral catheters and cultures: and modern treatment, the employment of autogenous vaccines.

3. That the great advance in our knowledge of pathologic conditions of kidney, bladder and urinary tract is due, not only to the cystoscope, but to the *systematic* application of modern methods of urologic diagnosis, as is illustrated here in demonstrating the role the colon bacillus plays in diseases of the urinary organs.

These cases were selected not for the purpose of demonstrating the truth of the above statements, but rather to bring out certain clinical points that will be of value to every general practitioner and surgeon.

These five cases, gentlemen, were referred, because the predominating presence of urinary symptoms classified them as urologic cases. Practically, they were not urologic; for treatment, necessary to recovery was hygienic and dietitic—the province of the internist; surgical, the province of the gynecologist or general surgeon, inasmuch as operations necessary to cure, were upon the uterus and appendages and not upon the urinary organs themselves.

Had the correct diagnosis been made, I, as an urologist, would never have seen the cases. Can this condition of affairs be prevented? Yes. If we carefully review these five cases, in fact, in almost all cases of coli bacilli infection of the urinary tract, we may note what may be termed six cardinal symptoms, subjective and objective, which, when combined with therapeutic tests, hygienic and dietetic, will enable the general practitioner and surgeon to treat pathologic conditions of this character, in many cases, rationally, instead of either trusting to nature or referring the patient to the specialist.

To bring out these points in a short paper, requires brevity, so the many omissions of purely scientific points must be excused; for this paper is not a treatise.

The cardinal symptoms are: Urinary symptoms, frequent urination, pain upon urination, or along urinary tract accompanied by:

1. Constipation.
2. Diarrhea in children.
3. Tympanitis in children and adults.
4. History of insufficient intake of fluids.
5. The presence of coli bacilli in excess or alone in the urine.
6. The absence, often in the male, of recent venereal disease and the presence of urethral discharge.

The therapeutic tests (hygienic and dietetic):

1. Limitation of diet in general to two meals a day. Breakfast limited to cereals, rice especially recommended and cooked fruit. Dinner, cooked vegetables and fruits, easly digestible meats, farinaceous foods; no sweets.

2. A radical change of diet, that is, if patient is accustomed to certain forms of food, give him the reverse chemical character, on the principle of "rotation of crops," so if the colon bacillus thrives on the present form of diet, as is evidenced by the infection, give it the opposite diet.

3. Daily ingestion of sufficient water, 8 to 9 glasses; other fluid may be weak tea, hot water, buttermilk.

4. Hot baths daily, temperature 105 (Fahr.) gradually increasing to 110-115 degrees; patient should remain in water long enough for skin to become scarlet and remain so, varying from 5 to 10 minutes.

5. Outdoor exercise and calesthenics which exercise the abdominal muscles.

6. Medication.—First a calomel purge, followed by saline; later, salines as magnesium sulphate, in drachm doses once or twice daily P. R. N.

Combined with the medical treatment, the surgical must not be forgotten, for if there is any obstruction to the urinary tract, as for instance, pronounced cystocele in women, enlarged prostate in men, stricture in urethra, or ureters, calculi in bladder, pelvis of kidney or ureters in both sexes, medical treatment will be of slight avail in most cases.

Gentlemen, an analysis of each case presented would undoubtedly bring out many points of interest and show why, in some cases, local treatment as irrigation of bladder is indicated and not in others, as in cases Nos. 1 and 3. In the former case, boracic acid irrigations were prescribed, and it is this form of medication which should always be employed unless the infection is mixed as in case No. 3, when potassium permanganate (1:6,000) or oxycyanid mercury (1:10,000) is indicated, because of the staphylococcic infection present. Silver nitrate should not be used; for mechanical cleansing and stimulation of the circulation of the urinary organs by heat, to diminish congestion is the object sought, thereby increasing resistance of urinary tissue to infection rather than to lessen it, by increasing congestion and destroying epithelial cells, as often occurs when strong injections are used. In case No. 2, no local treatment to the urinary tract was advised, as pathologic conditions of bladder were insignificant and it was evident that removal of the cause would speedily effect a cure.

Urinary antiseptics.—Urotropine and like drugs here have no place. Their employment, since, if they are urinary antiseptics, pure and simple, as claimed, signifies treating symptoms and not the cause. The cause is the invasion of the coli bacilli from the intestines. Urotropine and like drugs interfere with digestion; indigestion signifies increased virulence of the coli bacilli; so these drugs' power to disturb digestion does more harm than their power to render the urine aseptic, does good. Salol which is both an urinary and intestinal antiseptic, on the contrary, is indicated in some cases. Santal oil, if fresh and properly administered or fluid extract of zea, c.c. 3.75 to 7.50, every four hours, are useful in almost every case, not as specific drugs, but as a means of rendering the urine bland, thus aiding recovery by giving rest, local and general, through stopping tenesmus and the frequent desire to urinate.

Gentlemen, if we stop and think for a moment, we shall remember that the colon bacillus is a natural habitat of the intestines; immediately realize that the object of all treatment is to keep this organism there, if so vigorous, that is, virulent, as to emigrate, reduce its virulence; if so abundant, reduce its numbers; in other

words, successful treatment demands a knowledge of how and why this organism invades, at times, the urinary tract.

Briefly, as I have already consumed too much of your time, I shall mention two or three laboratory experiments that aim to elucidate this problem: Dr. F. B. Turck[2] has fed coli bacilli to dogs, causing duodenal and intestinal ulcers. Dr. Helmholz[4] who has studied a large number of cases of peptic ulcers in children, has shown that they are due to the coli bacilli and that in one case, where death was due to hemorrhage from a deep duodenal ulcer, the bacteriological findings showed pure culture of coli bacilli. In other words, the invasion is probably hematogenous, through the organism's gaining entrance to the blood by denudation of intestinal mucous membrane.

If we refer to Dr. Neumann's investigation the presence of coli bacilli on out of door objects, we shall see how we may be constantly adding to the virulence of the coli bacilli in our bodies, by introducing new strains, cross-breeding, as it were, especially by eating certain kinds of food, which Dr. Neumann[1] has demonstrated carry this organism, especially fruit, and these experiments explain why, in many cases of intestinal indigestion, as we all have observed clinically, we often get beneficial results by prescribing cooked instead of raw fruits and why in our dietetic regime, in prescribing for coli bacilli infection, we should always prescribe food cooked, instead of raw, for this organism is undoubtedly the main factor in causing intestinal indigestion, toxemia, etc.

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A LAW OF SENSITIVENESS.

By Goldwin W. Howland, M.B., M.R.C.P., London.
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Consider your patients who are suffering from bodily ailments, whether of pelvic, abdominal or thoracic origin, or from direct nerve irritation, such as sciatica or neuralgia. Perhaps on the other hand the disturbance may be outside of the body, and have to do with individuals, or with occurrences in the world they live in; and by this I mean the worry and strain of household cares, the daily fight for financial success or political honors, with the effect of the failure of life-long investments, or the defeat of all cherished ambitions, the strain of poverty or the disgrace of closely allied relations; in short, the sides of our daily life that produce painful or excessive mental impressions.

Or in the third place, in the case you are thinking of, there may be a history you have gained by psychoanalysis which shows an old scar on the mind, of years standing, so old in fact that it is below the surfact of daily thought.

Finally, perhaps, there is some toxin in the blood current, alcohol, sugar, lead or intestinal poison, that is causing your patient's nervous system to lose its normal health.

In any of these cases, the bodily, external world, psychical or blood-poisoned sufferer, the effect, produced by these various causes, produces very frequently a similar clinical picture in the mental and nervous symptoms which they complain of.

The person passes from a condition in which their nervous system is normal to a condition of hypersensitiveness and the hypersensitiveness may be caused, let me repeat again, by an organ in the body sending excessively intense or abnormal stimuli to the brain or cord; by the events of daily life outside the individual's body, inducing more than a normal rise in the emotional side of his being; by a similar rise being caused by the memory of past events in our lives, or by lastly the toxic effects of blood poisons producing a similar functional condition of the nerve cell, as follows other nerve and psychical stimuli.

Again, perhaps, this patient of yours has had a parent of nervous nature, an epileptic or hysterical or insane ancestry, and their child life has displayed the evil trend of an inherited hypersensitive mind, then you must expect that the stimulus of body,

world or mind, need be of so minor a degree that to a normal person it would pass unnoticed, but in the inherited neurotic may lead to an acute series of symptoms.

However, be the patient sensitive more than usual, or be he normal, a certain intensity of stimulus will render each and all hypersensitive.

Now, having reached this plane, a strange phenomena occurs, inasmuch as, not only are they supersensitive to the original cause of their malady, but they become extremely more conscious of all stimuli, bodily, external world or mental.

Take a simple case: Mrs. W., aged 37, is a sensitive; her mother is an elderly woman of sixty-seven, who suffers from occasional severe attacks of local peritonitis, dangerous at her age. This external world stimulus, when it occurs, raises the daughter's sensitivity above normal and she becomes hypersensitive to all organs of her body, but usually one predominating.

She has nervous dyspnea, that is, she becomes conscious of the act of breathing, particularly so on any increase of exertion; she becomes conscious of the throbbing of her carotids, and of the cardiac apex beat; she feels the ache of that much bedraggled symptom—a floating kidney. As the mother recovers, the consciousness wears off, and these signs are no longer noticed.

Miss T., aged 38, has external world stimuli. "Indulges in speculation, and as a result has angry discussions with her father." Immediately following this cause, her sensitivity rises, she feels pains in manifold regions of the body, has cephalalgia, becomes conscious of her abdominal vessels pulsating, and she shows marked cerebral loss of control and difficulty in concentration, reading, sewing or writing, common symptoms of hypersensitivity.

Mr. J., aged 37, complains of three weeks palpitation of heart, consciousness of breathing, pains in back, dyspnea on slight exertion, inability to concentrate, easily loses control and mental balance. Cause is an external world stimulus, having discovered his wife exactly three weeks before in another man's embrace.

And so we can go from case to case, all showing a similarity in symptoms, the question being to discover the cause.

One of the most important features of these cases must now be considered.

Freud in his works speaks of many cases in which an old mental scar of years before is situated deep in a person's consciousness, but in which the person transfers the active memory over to some probably concurrent physical condition, which may be the apparent trouble for which the person seeks advice.

But in these hypersensitive patients the fact I now refer to comes sharply into view with a frequency which places the theory of Freud (in my experience) as a most unusual condition and the law may thus be formulated.

If a person has had at any time in their life a defect or disease producing a supersensitive region, such, for instance, as a sciatica or a cervical occipital neuralgia, or a lumbar neuralgia, or myalgia, or an old psychical sore; or if the patient is at the time suffering from a mild form of any physical derangement or irritating surroundings, which ordinarily would not disturb them, nevertheless when some abnormal stimulus, be it bodily, external world, or cortical in origin, causes them to become hypersensitive, then this original weak point, or this subacute malady, becomes raised in sensitivity, and becomes the centre of consciousness.

It is extremely easy for the observer to mistake these secondary symptoms for the causes which produced the hypersensitive condition.

Take the ordinary nervous woman, who has had a great deal of household worry during the week, with children constantly demanding some attention or other, and add to that some more acute stimulus, be it an upset digestion with pain, or a disturbance with a neighbor, or a memory thought over a favorite child who has died in the past.

She comes to see her physician in a hypersensitive condition, and presents to you probably a whole series of supersensitive areas, cephalalgia, old occipital neuralgia, backache, sciatica, all weak points, scarred by previous maladies, but none of which are the actual condition which has produced her present state, which condition she herself may not even mention to you, nor have any idea as to its importance in making her abnormally conscious.

So that the law may read.

Normal individual and more particularly hereditarily over-sensitive people, reacting to stimuli which make them hypersensitive, and so hyperconscious of their bodies, not only suffer from the conditions produced by the morbid agent, but also become hyperconscious of former bodily and physical injuries that have left slight abnormalities, and to such a degree that these old conditions may replace in prominence the actual diseased area in the patient's mind and feelings.

This law I find so general and so common in practice that by stating it here some advantage may follow to some fellow-physician. In conclusion let me briefly cite a few cases:

Mrs. M., aged 40, complains of pain between the shoulders. Careful study of her symptoms shows she has a dyspepsia depend-

ent on a myasthenic condition of the stomach and the usual trend of signs, namely, pain after eating felt between shoulders and left side, relieved by eructation of gas.

This might appear to be the main trouble, but on following the case backward one finds the duration only three weeks, which at her age would impress one as pointing towards a nervous cause for the myasthenia.

The day the attack first occurred she had had her dinner and was begged by some friends to go to the cemetery with them. She agreed to do so, but dissented when she found they were to go in a motor. She stated that the drive made her extremely nervous and the attack of indigestion came on while she was out. Finally she gave the last crucial symptom, namely, her husband had been killed in a motor accident.

Here you have a woman in a hypersensitive condition with a development of a nervous indigestion consequent on it, but with a distinct cause, due in this case to an old psychical sore.

But take a converse case, namely, one where the actual physical complaint is hidden by the general hypersensitiveness and an old physical condition is considered the actual cause, and not, as in the last case, where the physical complaint was a direct resultant of the hypersensitive condition due to arousing an old psychical scar.

Mrs. R. complains of having severe pain down her sciatic nerve, of being generally nervous, excitable, and having lost some degree of power of concentration.

She has also some pain in her post cervical region, and has lately had some pain after eating. As her investigation is carried further, one finds she has had recurrent attacks of sciatica for years, and examination of the nerve itself shows, with her attention distracted, that the degree of pain here is very moderate.

But on going further into the stomach signs, a very definite picture of gastric ulcer (later confirmed) is proven, and the excessive disturbance of her sensitivity is finally anchored here, while the other pains complained of are found to arise in company with all nervous excesses she undergoes.

Lastly, let me call attention to a third class, where psychical trauma, by producing a hypersensitive condition, hide the fact that a true physical cleavage was present; the exact antithesis to the first case.

The lady in question had recently lost her husband, her money, and now her son was going wrong. She was consequently nervous, could not sleep, wept at slight provocation, had palpitation and numb sensations, and in conclusion it was noted that she had a

difficulty in swallowing, with some expectoration, and a feeling as if a ball were in the throat.

And yet this clear case of external world conditions causing hypersensitiveness and the usual muscular esophageal spasms of hysteria turned out to be a case of carcinoma of the esophagus.

While one can multiply cases of these types, and so can each of my readers, yet all prove the law that where bodily, external world or psychical conditions cause hypersensitiveness, one may expect to find the whole nervous system unduly responsive and there will be an awakening to an excessive degree of the sensitiveness of old bodily or psychical scars, which may fill the field of attention instead of the true exciting causes.

A physical cause may be concealed by a past psychical stimulus, or a psychical cause by a physical condition.

Trachoma Bodies.

During the last few months S. Hanford McKee has made upwards of 150 examinations of conjunctivae at the Montreal General Hospital.

The trachoma bodies were found in
14 cases of active trachoma.
1 case of catarrhal conjunctivitis (pneumococcus).
2 cases of purulent conjunctivitis in babies of two weeks.
2 cases of babies without any conjunctivitis.
1 adult male with no conjunctivitis.

The bodies were not found in
3 cases of active trachoma.
13 cases of old trachoma with scar formation.
60 cases of catarrhal inflammation.
28 normal eyes.
5 cases of gonorrheal conjunctivitis.
11 inflamed tonsils.
5 from the vaginal mucous membrane.

It would seem from these investigations, as well as those of others, that the trachoma bodies are not a constant finding and have not, therefore, been proved to be the cause of trachoma.

W. H. L.

A FEW CONSIDERATIONS.

Compiled by James S. Sprague, M.D., Perth, Ont.

"How much may be sinned through ignorance is shown," said Dr. A. Jacobi, of New York, "by the example of John Hunter, who denied the occurrence of visceral syphilis, though it had been described by those gigantic landmarks, Paracelsus and Morgagni."

The Lament of the Cultured Gonococcus.

I.

"Where schizomycetes grin in glee,
Where microbes dig their holes,
Where germs live free to split in three
And exult in their septic souls;
Where the still small sobs of the spores endure,
Where blue bacilli bore,
Where cultures pure an adjacent sewer
Will always provide a score—
Some gonococci duplex and small
(They were born at a picnic the previous fall,
And by agile turn and twist in flight,
Had escaped the maw of the phagocyte),
Were mourning each to the other twin;
"What sort of a hole is this we're in?"

II.

"Time was when they lived where their fathers died,
In a urethral columnar cell,
Then woe betide that devil "they spied
When they frisked in Boccacio's Hell!"
Now, 'twas, "O for a lodge in the vestibule,
Or in glands of Bartholin!"
And 'twas, "O to rule in a Skene's tubule,
For we can't grow on gelatin!"
And 'twas, "O for the grim and fierce delight
Of a duel to the death with the leucocyte!
Once to laugh in specific pride
At the impotent syringe and germicide!
And to mock, when the stricture fort defied
The charge of the sound and whalebone guide!"

III.

And it was "O to infect the fresh, fresh youth,
And the rounder old and gay,
And the jay uncouth, as with Sal and Ruth,
He disports in the new-mown hay!"
And 'twas, "O to breed in the infant's eye,
In the swollen joint as well,
And the facts supply when deacons lie,
And 'cart wheel' stories tell!"
"O 'tis woe in a sawed-off tube to split
And on measly spud to measly sit!
To see our spores grow weak and lean,
And the venom depart from our ptomaine!
And never a rainbow of promise to see,
In the crescent curve of the arched chordee!"

IV.

"Let the staphylococcus laugh long and loud,
At the sound of our hopeless wail;
Though our head be bowed, no putrid crowd
Can such honor as ours assail!
We've snapped many a streptococcus chain,
Hushed many a bacillus' bray;
And the search will be in vain who shall search for a stain
On the record we hold to-day!"
"Come death before a life of shame!
Come death before dishonored name!
And never our words will our acts belie—
We'll to infect for we will not try!
And neither in culture, in mucus or pus,
Has Neisser himself seen flies on us."

—*Cin. Lan. and Clin.*

"Just do your best," says James Whitcombe Riley in these two stanzas:

The signs is bad when folks commence
A findin' fault with Providence;
And balkin' 'cause the world don't shake
At every prancin' step they take.
No man is great till he can see
How less than little he can be
Ef stripped to self and stark and bare
He hung his sign out anywhere.

My doctern is to lay aside
Contentions and be satisfied;
Just do your best, and praise or blame
That follers that, counts just the same.
I've allus noticed great success
Is mixed with troubles, more or less;
And it's the man who does his best
That gets more kicks than all the rest.

"Ricord," says Dr. Jacobi, "whose name is forever illustrious in the annals and literature of his specialty, proclaimed in 1893 the inocuous character of the secretions of secondary syphilis when transferred to a healthy person. That oracular assertion tempted nineteen medical men in all countries to infect and ruin for life seventy-seven persons on whom they made experiments."

Lo, the Pallid Tryponema,
Hated most of all bacilli,
Hated by the country doctor
And the specialist so clever;
Thus salve! Salvarsan Ehrlich!

The fool was stripped to his foolish hide,
Which she might have seen when she threw him aside
(But it is not on record the lady tried.)
So some of him lived and some of him died.

—*Kipling.*

"O! who can tell what days, what nights, he spent
Of tireless, waveless, sailless, shoreless woe!" Yet,
Temptations (says John Boyle O'Reilley), wait for all, and ills
will come;
But some go out and ask the devil home.

It holds such enmity to blood of man,
That quick as quicksilver it courses through
The natural gates and alleys of the body;
And, with a sudden vigor it does posset
And curd like eagre dropping into milk,
The thin and wholesome blood.

—*Hamlet, Act I., Scene V.*

Do not, like a pompous imbecile, as Pope says:
Teach eternal wisdom how to rule,
Then drop into yourself and be a fool.

"The greatest criminal is he that poisons the germ cells."

Then gently scan your brother man,
Still gentler sister woman,
Though they may gang a kennin' wrang,
To step aside is human;
One point must still be greatly dark—
The moving *why* they do it;
And just as hamely can ye mark
How far perhaps they rue it.
Who made the heart, 'tis He alone
Decidedly can try us;
He knows each chord—its various tone,
Each string—each various bias:
Then at the balance, let's be mute,
We never can adjust it;
What's done, we partly may compute,
But know not what's resisted.

—*Burns.*

An experienced authoress most chastely, clearly and correctly writes:

"The body that never knows carnal desires,
The heart that to passion is always a stranger,
Is merely a furnace with unlighted fires:
It sends forth no warmth, while it threatens no danger.
But who wants to sit in cold safety there?
Touch flame to the fuel! then watch it with care.
These wild, fierce emotions that trouble your soul
Are sparks from the great source of passion and power;
Throne reason above it and give it control,
And turn into blessing this dangerous dower.
By lightnings unguided destruction is hurled,
But, chained and directed, they gladden the world."

"It is man and not a woman problem which we face to-day—commercialized by man—supported by man—the supply of fresh victims furnished by men who have lost that fine instinct of chivalry and that splendid honor for womanhood where the destruc-

tion of a woman's soul is abhorrent, and where the defence of a woman's purity is truly the occasion for a valiant fight.

"We recommend the enactment of a new Illinois law providing that medical certificates be secured showing bearer as free from certain diseases before a marriage license be given."

—*Chicago Vice Commission.*

"And yet, if the half be true, we are surrounded with, and the laws are protecting evils, means for destroying the purity of the home, the mere mention or contemplation of which is calculated to strike terror to the heart of the most optimistic."

For—

"Vice is a monster of such frightful mien
That to be hated, needs but to be seen;
But seen too oft, familiar to the face,
We first endure, then pity, then embrace."

—*Pope.*

"What children usually die of," says Professor Arthur Thompson, "is their parents, and what a nation dies of is a lack of men" —men who are infected and a lack of men to come out "from the crowd" and to tell the innocents and the world the need of legislation and study of these sins that walk in mid-day in our midst.

In Hood's poem, "The Song of the Shirt," the seamstress says:

"Oh, God, that bread should be so dear,
And flesh and blood so cheap."

Note.—This is a copy of Dr. Sprague's proposed publication, "Ideals in Medicine," chapter 46.

Physiologic Therapeutics

J. Harvey Todd.

Carbonic Acid Snow. J. D. Gold. *New York Medical Journal.*

The so-called portwine stains, nevi, cavernous, pigmented nevi, light or dark, with or without hair, yield to the treatments. Lupus erythematosus, carefully and persistently treated, will be cured. Epithelioma of the skin, the more recent the growth, the greater the chances of a permanent cure. Epithelioma of the lip yield marvellously to the applications. Tuberculosis verrucosis cutis, verucca and similar superficial growths are all favorable cases for treatment. J. H. T.

The Untoward Actions of the X-ray: Its Prevention and Treatment. W. H. Mick, M.D., Omaha. *Journal of Physiologic Therapeutics.*

We shall attempt to consider this from the standpoint of the physician and the patient. As the action of the ray is accumulative, the operator must do little work, protect himself or suffer untoward results.

A very common question for a physician unfamiliar with the X-ray dosage is: How many minutes do you treat a patient? He often feels that you are evading the question, when you say from three to thirty minutes. If every tube would deliver the same amount of radiant energy, the question would be easily answered. The exposure depends upon the amount of energy delivered. Then, too, the rontgen tube produces rays of different degrees of penetration. For this reason we use a tube producing a known amount, at a known distance, for a given time, with a certain amount of rest to accomplish a certain purpose, all varying as the condition warrants. The patient is protected by lead or ray-proof materials, varying in thickness as the penetration of the ray.

The internal or systemic untoward actions are unheard of, when we speak of patients treated, and concern chiefly the operator. The most important changes are produced in the skin. First, erythema; second, vesiculation; third, vesicles that progressively enlarge and coalesce; fourth, gangrene.

For local application in rontgen dermatitis, white vaseline, solutions of sod. bicarbonate and the finsen light are useful. Gangrene should be referred to the surgeon early.

J. H. T.

Reviews

The Treatment of Syphilis With Salvarsan. By Dr. Wilhelm Wechselmann, of Berlin, Medical Director of the Skin and Venereal Clinic, Rudolph Virchow Hospital. With an introduction by Professor Paul Ehrlich, of Frankfort-on-Main, Director of the Royal Institute of Experimental Therapeutics. Translation by A. L. Wolbarst, M.D., New York. With 15 textual figures and 16 colored illustrations. New York and London: Rebman Co.

Anyone interested in the subject of salvarsan will find this work intensely interesting and instructive. Before publishing the book Dr. Wechselmann had treated over fourteen hundred cases of syphilis with salvarsan, which clinical experience is incorporated in the book. This in itself should be sufficient recommendation.

The text contains a clear, concise description of the drug in regard to its chemistry, pharmacology and therapeutics. Special attention is given to the description of the modes of administration, indications and contraindications.

The plates illustrating syphilides, before and after the administration of the drug are admirable and greatly enhance the clinical value of the work.

Compendium of Regional Diagnosis in Affections of the Brain and Spinal Cord. By Robert Bing, Privatdocent for Neurology in the University of Basle. Translated by F. S. Arnold, B.A., M.B., B.Ch. (Oxon). Revised by David I. Wolfstein. With seventy illustrations. New York: Rebman Co.

The object of this work is to place before the profession a book useful in localizing the lesion or lesions in organic diseases of the nervous system.

The study of diseases of the nervous system is somewhat different from that of other systems of the body, in that one must have a good knowledge of the anatomy and physiology before any headway can be made. Indeed the localization of the lesion, the importance of which is immense, may be said to be the applied anatomy and physiology of the system.

The book before us is a concise, practical work. It is clearly written and well illustrated, and should be welcomed by both physicians and surgeons.

The Mechanism of Life. Stephane Leduc. New York: Rebman Co. $2.00.

The most enthralling subject to doctor, clergyman or any thinker in the world in general is *What is Life?*

Leduc has found a solution to satisfy himself, and he carefully gives his reasons and his own deductions.

The book is most interesting, especially as it is written along a new line of thought.

G. W. H.

Suggestive Therapeutics. H. S. Munro, M.D., Omaha, Nebraska. St. Louis: C. V. Mosby Co.

To-day a new awakening in interest has taken place in hypnotism and suggestion as forms of treatment for many forms of disease arising from nervous origin Munro is an old pioneer in this work, and in this new edition he adds several chapters, comparing his results and methods with those of Freud and Jung.

The book is most interesting and valuable, but it has one weak point, and that is a redundancy of material. A great deal of material of a theoretical character could be removed and published separately as "Scientific Theorisms" and leave this volume better and more readable for the elision.

The ideas of Munro coincide in most particulars with those of Freud, only he has the broader view of cause than that sexual groundpoint which even Freud himself has somewhat departed from. His experiences are largely based on hypnosis rather than simple suggestion, and he applies his knowledge to all sides of medical practice and declares his belief in its utility by the whole profession instead of the specialist in psychoses and neuroses.

This volume will help the confidence-requiring physician, will impress the anesthetist and the obstetrician, and arouse criticism in the heart of the Freudist. The roughest stone often contains the most precious jewel.

American Practice of Surgery. Vol. VIII. William Wood & Co., New York.

This, the last volume of the work, maintains the high standard set in the previous ones. It covers a vast amount of ground, including intra-thoracic, splenic, renal and pancreatic surgery, as well as surgical conditions met with in the liver and bile passages and genital organs. The last two sections are taken up with the law in relation to surgery and administrative work in surgery, with especial attention to hospital management, military and naval

surgery and railroad surgery. A general index to Vol. I.—VIII. is contained in the closing pages.

Viewed as a whole, we take pleasure in recommending the work to practising surgeons. Where so many different contributors are at work it is impossible that all should attain the highest standard, but we think the authors have most efficiently discharged their trust and bespeak for the work greater success than the preceding edition.

G. E. W.

A Pocket Medical Dictionary. By George M. Gould, A.M., M.D. Sixth edition, revised and enlarged. 34,000 medical words. Price $1.00. Philadelphia: P. Blakiston's Son & Co.

Medical terminology is constantly enlarging, thus new editions of the dictionaries are called for now every few years. This shows a keen demand, and the fact that nearly 300,000 copies of Gould's medical dictionaries have been sold proves their worth to the profession. There are over 4,500 words added to this new edition. The book can be heartily recommended to medical students. For the members of the profession we consider the larger works more desirable.

Nostrums and Quackery. Articles on the Nostrum Evil and Quackery. Reprinted from the *Journal of the American Medical Association.* First Edition. Chicago: The American Medical Association, 535 Dearborn Avenue.

This book, a unique one in medical literature, is a comprehensive study and report on the nostrums and quacks. It is designed that it should lie upon the reception room table to be read by patients when waiting. It is divided into three parts, as follows: Part I.—Quackery; Part II.—Nostrums; Part III.—Miscellaneous. In its 500 pages there is a wonderful amount of information upon the subject.

The Conquest of Nerves. A Manual of Self-help. By J. W. Courtney, M.D. Price $1.25. Toronto: The Macmillan Company of Canada, Limited, 70 Bond Street.

This is a small book of 200 pages, written, as the author expressly states, to be a *self-help* to those afflicted with "nerves," or, in other words, with either neurasthenia, hysteria, or other neuroses or psychoneuroses. It discusses so-called Christian Science cures, Emanuel Movement cures, New Thought cures, and points out how cures are brought about through the agency of *self* alone. It is designed to offset the tendency of the afflicted to patent medicines and religio-medical cults.

STEDMAN'S MEDICAL DICTIONARY. By THOMAS LATHROP STEDMAN, A.M., M.D., Editor of *Twentieth Century Practice of Medicine*, Editor of *The Medical Record*. Illustrated. New York: William Wood & Co.

William Shakespeare wrote many years ago, "Comparisons are odorous." Some years later Dr. Tobias Smollett came along and wrote "Comparisons are odious." The latter quotation is quite commonly used in every-day conversation and considered by many as Shakesperean. This new dictionary enters a field already exceedingly well tilled. The distinguished author recognizes this, but, though the fact be never so apparent, one must refrain from making comparisons where every production in the field seems almost to be perfect. There is little need, therefore, to make comparisons. It will be universally admitted that Dr. Stedman possesses both the knowledge and experience which would go to make him a first-class medical lexicographer. We take it that he will be the protagonist for a purer and more desirable medical terminology. For example, if you consult this dictionary you will find scolecoiditis suggested as preferable to appendicitis; oothectectomy as preferable to ovariotomy, etc., etc. As in other up-to-date medical dictionaries, one will find Breslau fever, Bright's disease, etc., etc., under the proper name and not under that of disease, fever, etc.

The book is beautifully bound in green morocco, green edges, thumb index, gilt title on first cover page. It will be a very handsome and exceedingly useful medical work in any library.

"Cesare Lombroso, a Modern Man of Science." By HANS KURELLA, M.D. Translated by EDEN PAUL, M.D. New York: Rebman Co. $1.50.

The biography of a great Italian will be read with pleasure by those who are interested in anthropology. Lombroso, the discoverer of the cause of the disease pellagra, was the most advanced writer in criminal disease from the physician's standpoint, and might be termed the Italian Darwin. He believed our criminal laws based on a wrong view, as he proved that criminal instincts were either inherited, as the form and atavistic signs present in their body clearly showed; or were due to the education and controlling forces that were pressed into their lives. This volume exhibits both the man and his theories, and will aid and interest the physician in broadening his examination of his patient's degenerative symptoms, as well as widening his views of life.

G. W. H.

Refraction and Visual Acuity. By Kenneth Scott, M.D., C.M., F.R.C.S., Edin.; Consulting Ophthalmic Surgeon to St. Mary's Hospital for Women and Children, London, E.; etc., etc.; with sixteen illustrations and one colored plate. New York: Rebman Company, 1123 Broadway. Price, $1.75.

This is a little volume of some 180 odd pages, containing a lot of useful information for the physician who is prescribing glasses. In the larger text-books one looks in vain for details concerning testing vision and the prescribing and fitting of glasses and spectacles, all of which this little book treats in a very readable manner. Considerable space is given to the visual acuity required in government, shipping, railway and the other services.

W. H. L.

Modern Treatment by American and English Authorities. Edited by Hare. Lea & Febiger, publishers.

This second volume of an ambitious work corresponds in several respects to the first. The binding and presswork are excellent. The subjects are well chosen, and so are most of the authorities; but why the title of the work should in any way refer to "English authorities" it is difficult to understand, for in the first volume Sir Lauder Brunton is the sole English representative, just as in the second out of 21 authorities is James Mackenzie. As in the first volume, so in this, the majority of contributors are Philadelphians. Nevertheless an excellent volume has been added to the work. Of especial note is Mackenzie's 56 pages on the modern conception and treatment of disorders of the heart and circulation. This article alone makes the volume desirable.

Another article of outstanding merit is that by Gottheil on the treatment of syphilis, wherein an excellent summary of all available methods is given in a thoroughly practical manner. Some attention is paid to 606, though at the time of writing this method was only in its infancy.

Among other articles included are "The Treatment of Diseases of the Digestive System and Allied Organs"; "The Treatment of Diabetes and Obesity"; "The Treatment of Diseases of the Nervous System"; "The Treatment of Diseases of the Genito-Urinary Apparatus"; "Treatment of Diseases of the Uterus and Pelvic Organs"; "Treatment of Diseases of the Skin," and two articles on non-surgical diseases of the eye and the ear.

On the whole this forms a most useful volume, completing, as it does, a work thoroughly representative of American therapeutics, which, nevertheless, can scarcely fail to be helpful in daily practice.

G. W. R.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

Medicine: Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.
Surgery: Walter McKeown, Herbert A Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.
Obstetrics: Chas. J. C. O. Hastings, Arthur C. Hendrick.
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Physiologic Therapeutics: J. Harvey Todd.
Psychiatry: Ernest Jones, W. C. Herriman.
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Rhinology, Laryngology and Otology: Geoffrey Boyd, Gilbert Royce.
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Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.
Anesthetics: Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR.

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COMMENT FROM MONTH TO MONTH.

Further restrictions in the selling of alcoholic beverages are, by newspaper report, shortly to be considered by the Toronto City Council. The proposition is to close all bars at eight o'clock p.m. and at 12 noon Saturdays.

Now, we submit, this is foolish, and is certainly not judicious in the interests of temperance, and we believe the medical profession should take a pronounced stand upon the subject of alcohol as a beverage, as both to the time and quantity consumed.

In the forenoon no man requires alcoholic stimulants at all. A young man up to twenty-five or thirty years does not require them at any time; and medical men well know, wives and mothers well know, that it is the man who commences drinking before breakfast or before luncheon who gets sick, causes trouble, and is in a pathological condition.

Along in the afternoon or evening, about or after the meridian of life, the physical powers may require some stimulation, but that is physiological. It cannot too strongly be put—the former is *pathological*. The " forenooner " gives unending trouble.

If legislators and temperance advocates could only be brought to a sense of this forenoon evil, they would soon legislate for the abolition of the bar in the forenoon. That an open bar in the forenoon, that is, up to eleven o'clock at any rate, is superfluous, any one can easily prove for himself by inspecting and observing.

Again, if temperance people turned their attention to restrictions of sale, individually, to two or three drinks, forenoon, after-

noon, or evening, great good could be accomplished. While two or three drinks might be called physiological—after that more is not required, becomes harmful, dopes the victim, and brings him into the realms of drunkenness.

We venture to predict that if bars were entirely closed every day until 12 o'clock noon, there would be less inebriety in the land and fewer dipsomaniacs.

Successful Medicine is the title of a new medical journal to be published bi-monthly, just established in Chicago. Its object is to advance the commercial end of medical practice. If it can aid in doing this it will establish an enviable record for itself; for, we are afraid, if all we read about the non-success of the medical profession in the present day, yes, if even one-half of it be true, the outlook for the practitioner is not, nor will be, roseate.

In looking over this new medical journal, we find a symposium —Why is the Remuneration of the Average Physician so Low? It states that the average annual income of $1,000 or less is disgustingly low.

Amongst others taking part in this symposium, we find the names of Drs. J. H. Carstens, Detroit, and Isadore Dyer, New Orleans, the former perhaps better known to Canadians. Dr. Carstens rather takes an optimistic view of the outlook for the average physician, believing the average income nearer the $3,000 mark. He refers to that hackneyed jibe about the physician being a poor business man, and in his rough and ready way says, " that is all rot." He considers doctors just as good business men as others, and of the latter he repeats what we have heard or read before, that 95 per cent. of business men fail, and considers that medical men can afford to earn less in order to preserve their great and noble heart and serve humanity. Quite apparently *Successful Medicine* will have no field, so far as Dr. Carstens is concerned. Medicine is successful enough now.

Dr. Dyer, too, recites the old evils of contract practice, dispensary and hospital abuse, low fees for services, etc. These reasons are all bewhiskered and old enough to vote. He sees in the future the practice of medicine controlled by the state. We agree in this horoscope.

The trouble in getting any concerted action towards bettering the commercial part of medicine will lie in the fact that the successful ones will be quite content to leave well enough alone, and will scout the idea of the less fortunate taking it upon themselves to better conditions for all and in general.

The field of medicine is the great hunting ground for quacks.

No matter whether they spell their names with letters from the upper or lower case, they are one and all parasites who will always infest the domain of medicine. They use all the arts of the great motive power of modern business—advertising. They do this in large space, and the newspapers are at their feet. Cut out the publicity of the religio-medical cults, patent medicines, etc., and you decapitate the monstrous frauds and leave the profession of medicine to care for the ills flesh is heir to.

If you acknowledge that too stupendous an undertaking, there is nothing left but to fight the enemies of the profession with similar weapons, or else forever hold our peace.

Antityphoid vaccination promises to have no inconsiderable sphere of usefulness as a measure in the production of artificial immunity against typhoid fever.

There will be some who will assert it were far better to obtain for each community a pure and uncontaminated water supply, but until that can be established any measure which will tend to protect those unduly exposed will be a distinct gain and another feather in the cap of scientific medicine.

At the present time antityphoid vaccine can be obtained as easily as other biological products: and amongst others licensed to produce and sell this product is the well-known firm of Parke, Davis & Co., Detroit and Walkerville.

It is of interest in this connection to quote from the report of the Commission appointed by the Academy of Medicine of Paris.

In the English, German and American armies, antityphoid vaccination has been successfully applied, and more than 100,000 have been inoculated.

Comparisons of the inoculated with the non-vaccinated reveal that there has been a reduction of at least one-half in the number of cases, one-half the mortality and very much milder attacks in the vaccinated.

The immunity produced by antityphoid vaccination lasts from one to four years: and if this period is to be prolonged then recourse must be had to revaccination. Inoculation has been proved to be without danger, but it should only be practised upon perfectly healthy subjects.

The following should be particularly benefited by antityphoid vaccination: Physicians, nurses, internes, medical students: members of families in which there are bacillus carriers; young persons coming to live in cities from the country: where the disease is frequent, all the population of such cities; soldiers or sailors sent to regions where it is either endemic or epidemic.

The Doctors' Dilemma is an article in the October 14th issue of *The Spectator*, dealing with Mr. Lloyd George's National Insurance Bill, and its relationship to members of the profession and the friendly societies. As Mr. Punch has recently put it, Mr. Lloyd George now understands why these societies are called friendly.

Mr. George recently had an important conference with representatives of the medical profession and members of the friendly societies which has served to emphasize the points at issue. While the doctors are trying to escape the present tyranny of the friendly societies, the latter are determined not to lose control over the members of the medical profession who attend their members. As they cannot hope for means of settling their grievances against the Bill, the friendly societies in some quarters are demanding the measure be dropped.

The Spectator takes a very judicious view of the entire matter, and practically endorses the stand taken by the medical profession.

There are six cardinal points which physicians say must be carried out before they accept the Bill:—

1. The patient is to have free choice of his own doctor. As this is in the interest of the patient more than the physician, *The Spectator* states this should receive the hearty support of the general public.

2. The doctor must be free of friendly society control. This, in the language of *The Spectator*, is absolutely vital to the medical profession, as the Bill proposes to convert friendly societies from voluntary organizations into state agencies.

3. The wage limit should be £2 for those insured. This the journal considers too moderate.

4. The medical profession should be adequately represented on the health committees. It doubts if the medical profession would obtain any real value from this concession.

5 and 6. That the medical profession determine the method and rate of payment in each district, with due regard to the duties performed. *The Spectator* considers it would be better for the profession to say: "Unless you pay us at such a rate as we consider adequate, we will refuse to work."

The Spectator, after having given considerable thought and consideration to this Bill, believes that the doctors under the new *régime* will be worse off than under the friendly society control as at present, and goes further and says flatly that the whole idea of any compulsory scheme for insurance against temporary sickness ought to be dropped.

News Items

THE *Physician's Business Journal* of Philadelphia, has discontinued publication.

THERE are 512 medical students registered this session at Toronto University.

THERE have been over 8,000 persons killed in Canada in the past four years.

THERE are 45 patients undergoing treatment at the Ste. Agathe Sanatorium, Quebec.

THERE are said to be between 700 and 900 cases of tuberculosis amongst the school children of Toronto.

THE spread of smallpox in certain districts of Quebec is causing the Board of Health considerable alarm.

CANCER is still increasing in Ontario. In 1908 there were 1,348 deaths; in 1909, 1,597.

DR. J. M. ELDER, Montreal, is now Assistant Professor of Surgery and Clinical Surgery at McGill.

DR. D. D. MACTAGGART, Montreal, has been appointed Professor of Medical Jurisprudence at McGill University.

DRS. WALTER MCKEOWN and F. A. Cleland, Toronto, attended the meeting of the Clinical Society at Philadelphia.

THE deaths from tuberculosis in Ontario show a decrease in 1909 the number being 2,380. In 1908 there were 2,511.

DURING the last few months S. Hanford McKee has made upwards of 150 examinations of conjunctivae at the Montreal General Hospital.

IN the month of October there were 219 cases of diphtheria in Toronto; the typhoid fever cases numbered 55 against 80 for the same month last year.

ACCORDING to the fortieth annual report of vital statistics for Ontario just issued there were 54,465 births, 22,366 marriages and 32,628 deaths in Ontario in 1909.

Dr. J. Alex. Hutchinson, Montreal, has been appointed Associate Professor of Surgery and Clinical Surgery in McGill, with a seat in the Faculty of Medicine.

A branch of the St. John's Ambulance Association is to be established in Montreal. The Canadian Branch is now giving first aid instruction to 3,000 persons.

Dr. W. H. B. Aikins, Toronto, has returned from Paris and London. In the former city he spent some weeks with Drs. Wickham and DeGrais, at their radium laboratories, and also at the Radium Institute, London.

Two hundred and thirty-two deaths have occurred in Toronto from tuberculosis since the first of January. Between four and five hundred tuberculosis cases are now registered with the Department of Health.

Dr. Chas A. Hodgetts, Medical Adviser to the Canadian Conservation Commission, has returned from Europe where he attended the Congress on Infantile Mortality at Berlin and the International Hygienic Exhibition at Dresden.

Next April Lt.-Colonel J. A. Grant, Toronto, will be transferred to Halifax; H. R. Duff will come to Toronto from Kingston; C. W. Belton, London, will go to Kingston, and Foster, of Halifax, to Quebec.

Jane P. Sproule, M.R.C.S., L.R.C.P. Lond., who has been studying oto-laryngology in Vienna and London for the past fifteen months, has begun practice as a specialist at 47 Grosvenor Street, Toronto.

Toronto's filtration plant begun two years and one-half ago, is completed. It cost $1,250,000 and covers 17½ acres. It has twelve filters and the capacity of the filters is 50,000,000 gallons in 24 hours. The process is one of slow sand filtration.

The new home of the Academy of Medicine, Toronto, was opened on the 26th of October. The President, Dr. N. A. Powell, and Mrs. Powell received. A large numbers of members, wives and friends were present.

Dr. N. H. Alcock, Professor of Physiology in the University of McGill, advocates an Institute of Physiology in connection with the university. He states the cost would only be $25,000 and the yearly maintenance about $4,000. He believes such an institution could do much in reducing infantile mortality in Montreal.

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